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SEPTEMBER 19, 1928

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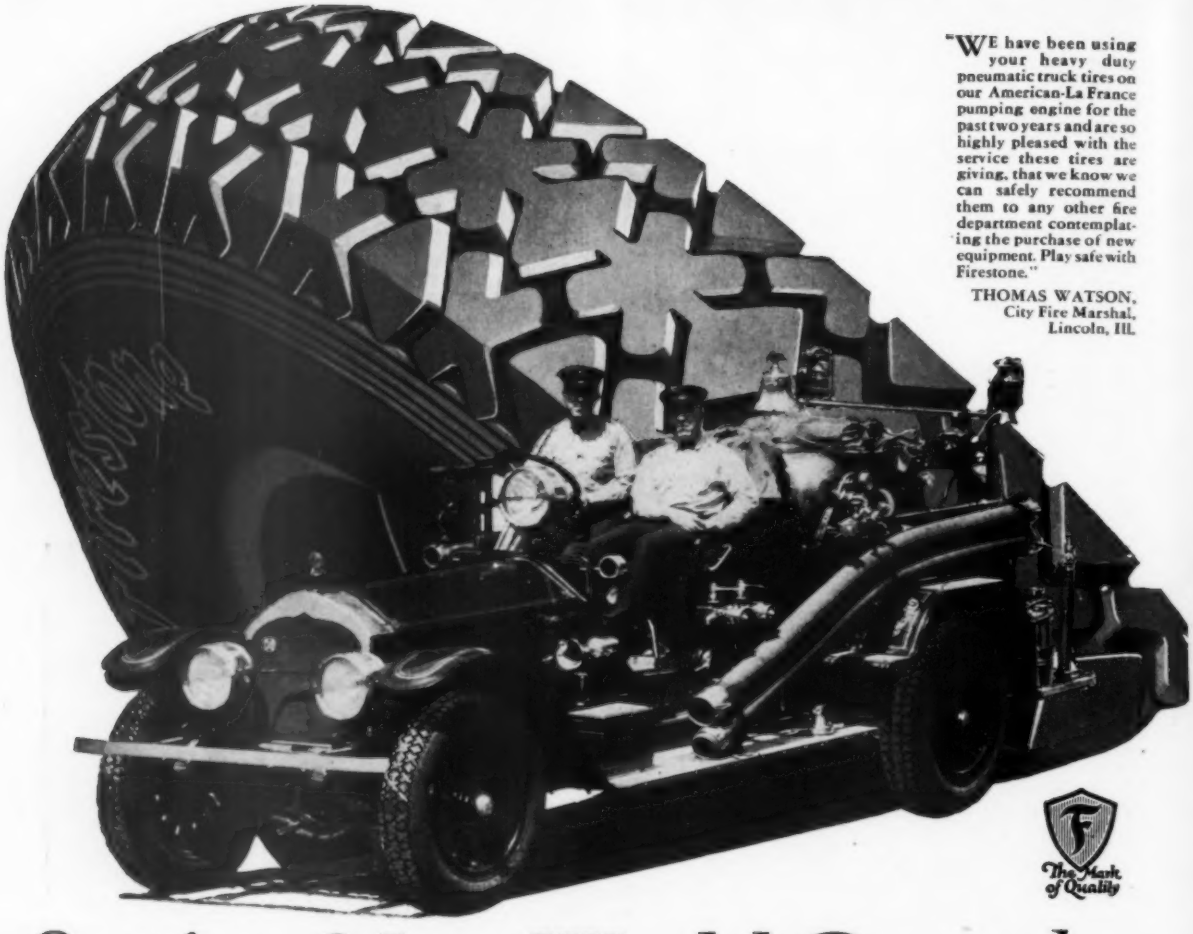

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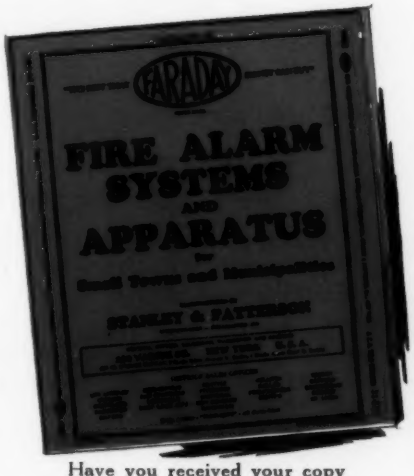

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FIRE ENGINEERING

A Consolidation of FIRE AND WATER ENGINEERING and THE FIRE ENGINEER

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Congratulations!

The Publishers

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From "Fire Engineering," August 22nd, 1928:

"Many Fire Chiefs throughout the country believe that the alarm system contributes to the increased efficiency of their Departments, on an average at least forty per cent, and in some instances more."

Increased Department Efficiency

AS evidenced by the above excerpt from a recent article in FIRE ENGINEERING, the signaling system plays an important part in the operation of fire fighting organizations.

A. D. T. Central Station Fire Alarm Systems add even greater efficiency. They provide a means whereby fire signals are transmitted directly from the premises through the A. D. T. Central Station to the Fire Department. This permits prompt response to a call and the code gives exact location of the fire.

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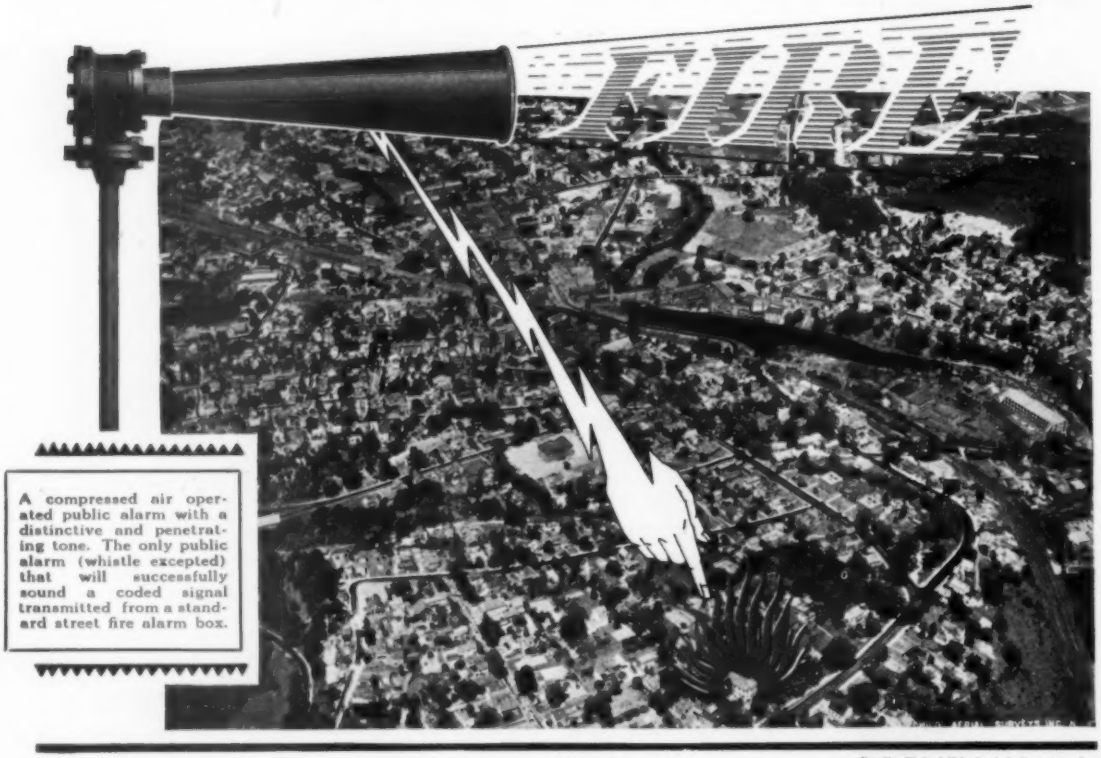

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Before you install a public alarm investigate the **Diaphone.**

A Bulletin describing the Diaphone more completely will be sent upon request.

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FIRE ENGINEERING

(A Consolidation of Fire and Water Engineering and The Fire Engineer)

The Journal of the Fire Protection Profession

VOLUME LXXXI SEPTEMBER 19, 1928 NUMBER 19

Making The Equipment Fit The Fire

Staten Island Division of New York Fire Department Meets a Wide Diversity in Types of Fires—Some Interesting "Kinks"

WHILE the New York City Fire Department as a whole encounters practically every type of fire imaginable, the honor of having the biggest variety rests with the division covering Staten Island, known as the Borough of Richmond.

Not only must the fire companies responding in this

Fig. 1—Chief John Spencer, 21st Battalion, New York Fire Department, Staten Island

division handle industrial, marine, and ordinary commercial fires, but these same companies have also to cover brush and grass fires in great numbers. One day they may be operating on a ship or dock fire, and the next day hard at work preventing a brush fire from reaching residential districts.

But like other divisions of the New York Fire Department, that located in the Borough of Richmond is possessed of officers who have a great deal of ingenuity, and who adapt their methods and equipment so as to handle whatever type of fire may be encountered.

Conspicuous among these officers on Staten Island is Battalion Chief John Spencer, of the 21st Battalion (Fig 1) who has proven himself most alert in developing new methods of handling new situations, as well as putting into operation innovations which have proven themselves in service.

Dock Fires

The water supply at some of the docks along Staten Island is scanty—that is, the supply furnished by the available small mains. In the event of a dock fire, or fire in some of the coal properties along water fronts, the biggest problem is getting plenty of water and getting it in a hurry.

Chief Spencer devised an arrangement which certainly saves time, and results in much faster work, and much more efficient operation by companies operating along the water front.

The diagram (Fig. 2) herewith shows this arrangement.

A 5″ pipe line attached to pier is extended to a point three feet below low-water line, and equipped with a strainer at the lower end. At the top a right angle bend is provided, also a horizontal run of pipe, which terminates in a 4½″ standard N. Y. Fire Department thread. This horizontal end is capped with a hydrant cap.

In the event of a water front fire, it is only necessary to run the apparatus up alongside the pipe, remove the

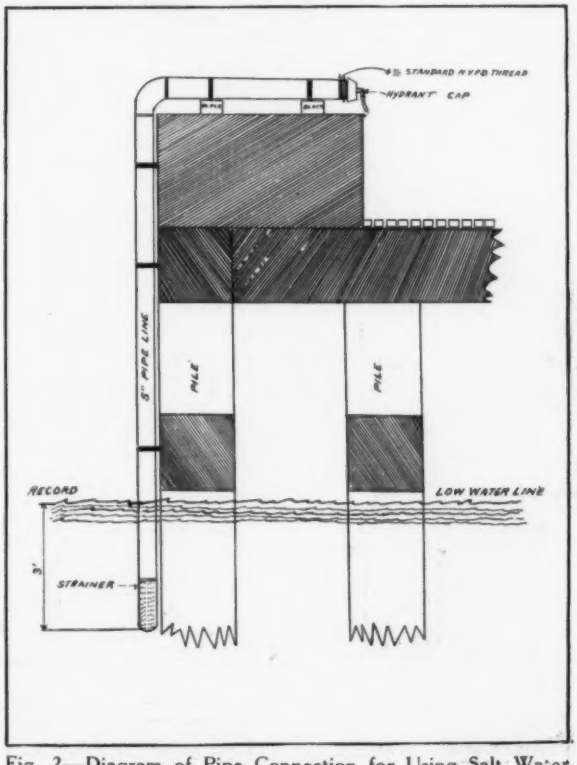


Fig. 2—Diagram of Pipe Connection for Using Salt Water to Extinguish Dock Fires

cap, and connect the engine to the fitting, and start the pump in operation (Fig. 3). Five of these have already been placed in service, and it goes without saying that they are going to prove a success.

In a test made on the first one installed, the draft was 13' 6". A motor pumper was connected up to the fitting, and put in operation, the discharge end being connected with deck pipe fitted with 1¾" nozzle.

Engine pressure was quickly run up to 120 lbs., and with this pressure the pressure at the nozzle was 90 lbs.

Other tests were made with lines leading directly from the pumper and without employing the deck pipe.

In every case the engine was able to deliver its full capacity, without overloading, and without any trouble whatsoever from air in the lines.

A Spray for Boat Fires

In manning lines on boats moored alongside the wharves, the department has been faced frequently with the difficulty of getting lines in operation in smoky passageways beneath deck. Here again Chief Spencer found a way of easing the situation, if not completely remedying it, by devising a combination spray and solid stream nozzle, as shown in the sketch herewith. (Fig. 4).

An ordinary tip such as is used on shut-off nozzles is employed. Back inside of the tip a brass ring is soldered to the inside of the nozzle bore. This ring is intended to cause sufficient constriction of stream flow to provide a little pressure for discharging water from spray holes. The spray holes consist of small holes drilled at an angle into the nozzle just to the back side of the ring. Two rows of holes are drilled around the nozzle, these rows being staggered.

Fig. 3—Method of Connecting Pumper to Pipe Shown in Fig. 2

When this tip is to be used, the nozzle is shut off, the tip removed, and this spray tip put in position. Upon opening the shut-off, spray is provided at an angle which helps drive the smoke and heat ahead, while the solid stream produced by the flow through the center of the ring serves to operate on the fire.

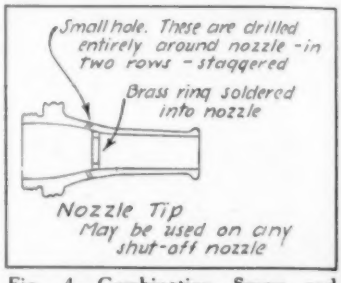

Small hole. These are drilled entirely around nozzle - in two rows - staggered
Brass ring soldered into nozzle
Nozzle Tip
May be used on any shut-off nozzle

Fig. 4—Combination Spray and Solid Stream Nozzle for Boat Fires

The value of this device is its convenience. It can be carried in the pocket and employed only when needed. It is not bulky and being so small every company can have one on hand and ready for operation when needed.

For Grass Fires

Once, when responding to a grass fire, Chief Spencer discovered a farmer operating on one with a sprinkling can. So effective seemed this ordinary sprinkler, or watering can, that Chief Spencer requisitioned a number for use by companies operating on grass fires. He has found them very effective. The sprinkling can selected is of three or four gallons capacity, and it requires but a small stream to work down the spreading edge of a grass fire. Following the man with the sprinkling can, come the men using brooms. These brooms are employed for beating down the remaining fire. The water discharged by the sprinkling can wets the grass and ground, and thus enables the brooms to stand a great deal more heat through keeping them wet. After using these watering cans for a great number of grass fires, the men in Chief Spencer's Battalion swear by them. And in speaking of brooms, Chief Spencer considers the rattan broom more satisfactory for severe use than other types due to the fact that at hot grass fires of great extent, the brooms must be employed for long periods of time., In the case of wire brooms, the wires lose their temper from this excessive heating, and therefore their usefulness is very much curtailed. Rattan brooms are kept soaked in water so that they are always tight and with the aid of water employed in watering cans, they do not suffer much from burning.

Thus the companies operating on Staten Island have been able to develop special means and methods of handling the big variety of fires they encounter, and in removing obstacles which are not ordinarily encountered in other sections of big cities.

Fire Station Erected in Corpus Christi—A new fire station is being built in Corpus Christi, Tex.

Watertown, Wis., Buys Pumper—A 750-gallon Seagrave pumper has just been ordered by Watertown, Wis. Delivery is expected within sixty days.

South Gate, Cal., to Have Department—The county fire department of Home Gardens which was formerly under the supervision of the county will be turned over to South Gate, Cal. Formerly Home Gardens was a unit of the Los Angeles County Fire Department.

Fire Apparatus on Fire—A fire truck was delivered to Keystone, Ia., by a representative of the General Manufacturing Co., of St. Louis. It was necessary to fill the gasoline tank en route, and in some way the gasoline caught fire and burnt the driver about his hands and face. No serious damage was done to the apparatus.

Should Fire Apparatus Speed be Reduced?

Subject of Great Concern to Chiefs—Local Conditions Must Largely Govern—Care and Quick Thinking Part of Driver's Qualifications

By CHIEF R. A. FOSTER, Norfolk, Va., Navy Yard Fire Department*

THE question of the proper speed that the fire apparatus should safely maintain is a difficult problem and one that has concerned chiefs ever since the motor driven fire engine made its appearance. Chief Foster has some very definite ideas on the subject:

Chief R. A. Foster

The subject which I am about to discuss is one which I think is creating a great deal of concern to every fire chief throughout the country. I have noticed from the records that we are killing more of our members in responding to alarms and returning from alarms than we used to kill. These records are becoming public, and it is time that we took some stand with the membership of the fire departments and seek the co-operation of the city officials in remedying some of the traffic conditions which exist in our cities.

It is possible now for anyone who purchases a car to get a permit to drive a car without any qualification as to vision and hearing, and they are allowed to drive on our highways. A little over two years ago I had a collision with a man who was blind in his right eye; he made a left turn and couldn't see me approaching on the side from which I struck him. The court that he haled me into, disqualified him from driving on five different grounds. Last August I had a collision with a woman who had owned a car four months and claimed to be an expert driver. She drove into one of our main arteries of traffic and stopped and hesitated as to which way to turn, and then turned deliberately into my machine.

These are conditions which will have to be handled locally. There are no two cities that are alike in their layout.

Bad Traffic Conditions

As an example, Atlanta is a city which is cut up into many triangular-shaped streets with many approaches from different angles. With the parking of automobiles on both sides of the streets, it reduces the traffic lines practically to small alleyways. It means that the drivers of our various vehicles have got to be more cautious in driving through these highways in response to alarms.

Chiefs Must Study Types of Pavement

There are several conditions which prevail in the class of pavement on which your apparatus has to roll. An asphalt street is more adhesive to your braking apparatus than a macadam street. If the driver of an apparatus which is rolling at a high rate of speed wants to apply his brakes, it causes the truck to skid over the pavement. So it condenses itself down to the point where the local chief has to study the intersections of the streets over which the apparatus is rolling and suit his speed in accordance with conditions, whereby he can get quicker results from the driver, where necessity calls for making a stop.

Necessity for Careful Drivers

Years ago, we were able to extinguish fires very efficiently with horse-drawn apparatus, and the records show that we had fewer accidents throughout the country with horse-drawn apparatus than we do with motor-driven apparatus today. The chiefs in those days were very careful in selecting drivers to manage the horse-drawn apparatus. Today some of the departments select a young fellow as driver because he is the best man for that work. He knows his machine and is able to make speed. A man who drives a vehicle to a fire should be a man whose mental equipment is such that he is capable of quick thinking—a man who sees the point of congestion and is able to take measures to avoid that congestion, and who is able to guard against the possibility of running into a jam and having a collision.

If you don't urge your drivers to be cautious in response to alarms, you not only lose the value of that machine to the city by destruction through a collision,

* Excerpts from a paper read before the annual convention of the Southeastern Fire Chief's Association at Atlanta, Ga.

"I HAVE today on my machines the same drivers I put there nine years ago. In going to a fire recently one of the men said to the driver, 'You have an open street; why not step on it?' The driver replied, 'Mind your own business! I will be whole when I get there.'"

but there is a possibility of that machine running into a number of people.

I can come to no definite conclusion as to the rate of speed—the maximum or the minimum—in the limits of our various cities. Conditions differ. We have had numerous accidents in cities in the South—deaths of pedestrians and deaths of members of the department.

No Man With Physical Defects Should Drive

A man should never be allowed to drive a piece of apparatus if he has any defects in vision, hearing, etc. I find in lots of our departments men are appointed because they are good fellows, but who suffer from physical ailments. I know of one department that employs a man as driver who is deaf. He was appointed during the war period, when it was hard to get men. He should have been retired, but he is still in active service. Those conditions are something that should be controlled by the local departments.

More Accidents in Small Towns

There have been more accidents occurring in the smaller towns than there have been in the well-regulated, larger cities of the country, where congestion is the greatest. It seems to be the policy of the small town fire departments to pick out a fellow who is fastest in handling the apparatus, and not the man who is best suited to handle it. Such towns claim that they cannot afford to pay a proper operator, so that the chief will select a man who he knows can make the fastest response and who he can depend upon to bring the apparatus to the scene as quick as possible.

Map Out Line of Travel in Answering Alarms

I remember that in one of our cities we mapped out a line of travel, when we had an alarm of fire, in responding to certain boxes. It was the duty of the captain of the company to map out the most direct line of travel and to cover that same line in case of alarm, and as many companies as possible, adjacent to that box, used that line in responding to an alarm. We were able to reduce collisions by that method.

Recently I was in a city where two pieces of apparatus had collided due to this one particular cause. Number 1 engine company was out testing its engine at the corner of Seventeenth and K Streets in the City of Washington. The hook and ladder company from No. 243, located at Rhode Island and Fourteenth Street, came in. The route assigned to the fire engine company was over K Street, but the captain, being headed up Seventeenth Street, thought he could make time. Being the first company due at the box, he drove directly up Seventeenth Street and ran into No. 2 hook and ladder. No. 2 had expected to pick him up at Fourteenth Street, and not at Seventeenth, and the two pieces of apparatus collided. The Chief, having previously made the rules and regulations, disciplined the men for a violation of those rules, fined the captain and the driver $50 apiece as compensation for the damage done to the two vehicles. You may call this harsh treatment, but I talked to the captain and he told me that he got exactly what he deserved for not following the orders and that he did not feel in any way aggrieved at that treatment.

Limiting the Rate of Speed

Some cities have limited the rate of speed to a maximum speed of twenty miles an hour in the congested district; twenty-five miles in the semi-congested; and thirty miles in the outlying districts. Now, what I want to bring out is this. In well-regulated departments, where true discipline is upheld, the records show that collisions and accidents have been considerably reduced, but where they run the department on the idea of popularity or good-fellowship you will find no control or regulation of your apparatus.

We used to average with the horse-drawn apparatus, on the first five or six blocks—a block of 300 feet—a little less or a little more than one-half minute of travel. In the city of Washington, it was regulated by the Chief at three minutes from the time the box was pulled until they had the water line in play or the chemical line, if any, up. They did it by ratioing the department into sections, and they were able to expedite affairs just as much then as we do today with modern fire apparatus.

When you tell your city officials about the increase in speed you will be able to make with improved apparatus, they say, "You don't need such apparatus as we did when we had horses, because you can cover larger areas in just as quick time." That is a mistaken idea. As your city grows in population and in property values, it needs just that much more equipment to take care of that increase.

(*Continued on page* 823)

Chief Egner to Attend Convention

Among the many prominent chiefs who will attend the I. A. F. C. convention in Philadelphia will be Chief John C. Egner, internationally known as captain of the American Fire Team that visited London, England, in 1893 and later Paris in 1900.

Kansas City Fire Insurance Patrol Company

Chief Egner is seated in the center and is indicated by the arrow. The entire patrol consists of thirty-four men and three companies.

He was formerly chief of Kansas City, Mo., and is now Chief of the Underwriters' Fire Patrols in Kansas City.

When the American Fire Team that he trained went over to London, it won laurels against foreign competition for quick hitching, and in drilling contests. The crew consisted of fourteen picked members of the Kansas Fire Department who were trained by Chief Egner.

Mr. Egner served as chief from December 17, 1906, until March 28, 1918. He resigned from the department to become chief of fire patrols there. His father, Charles Egner, was a member of the Chicago Volunteer Fire Company No. 2. Chief Egner was born in Chicago and in his early days was a gymnast and acrobat with the old Robinson circus.

An Easy Fire—If Well Handled

Ventilation and Confining of Fire Not Given Proper Attention—Might Have Been Handled With First Alarm Assignment

THE article of the series on Administration appearing in the last issue of this journal well illustrates how a comparatively small fire may spread, despite the efforts of the fire department, if proven methods are not employed.

Fire got out of a bricked-in paint shop and involved a large number of automobiles with the result that the fire department had a bigger task on its hands than it was capable of accomplishing.

The fire occurred in a southern city of approximately 35,000 population.

The water supply of this city is good, there being almost an unlimited supply at a gravity pressure of 40 lbs. in the mains.

The fire department consists of four engine companies, one ladder company and one combination ladder and chemical company.

Engine Co. No. 1 is equipped with a 750 gal. triple combination; Engine Co. No. 2, 700 gal. triple combination; Engine Co. of No. 3, 500 gal. triple combination; Engine Co. No. 4, 500 gal. triple combination; Ladder Co. No. 1, aerial ladder truck; Ladder and Chemical Co., a city service truck with two 60-gal. chemical tanks.

Response to Alarms

First alarm calls out Engine Companies Nos. 1 and 3 and Truck Co. No. 1, while a general alarm brings out the balance of the apparatus; Engine Cos. Nos. 2 and 4 and the Ladder and Chemical Co.

Description of Property Involved

The diagram herewith shows a layout of the property involved as well as the property exposed to the fire.

The garage building, in which the fire originated, was a one-story brick structure with wooden roof, covered with tin, and painted. The roof girders were of steel but the superstructure supporting the arched roof was of timber. As shown in the diagram, the garage building was divided into five rooms: at the front part of the building was a stock room with offices on a balcony above. Alongside the stock room was the auto showroom. Separating these two rooms from the main part of the shop was a frame partition.

To the rear of the garage was a paint shop of about 50′ x 50′ in size enclosed in a brick partition and fitted with two doors, one a self-closing swinging door and the other a hand operated sliding door of tin clad, wood construction. The machine shop was separated from the repair shop by a frame partition, as was also the battery room.

Directly north of the garage, and adjoining it, was an old four-story hotel of brick and wood joist construction, with windows on the top two floors overlooking the garage. To the south was a two-story brick building used on the ground floor as a bowling and billiard hall with lodge rooms above.

Other exposures, as well as location of hydrants, are shown on the sketch.

The Fire

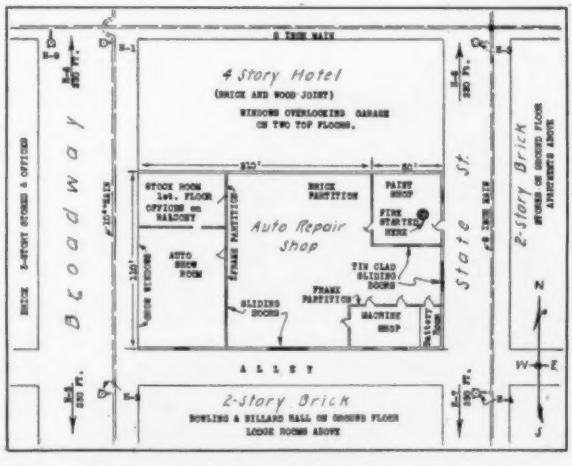
The fire started around 2 A.M. on a Saturday night when the repair shop was well filled with vehicles. A workman was in the paint shop fixing up a paint job for a customer who was to call for it on Sunday morning. He was using an electrically-driven paint sprayer and as near as could be learned, the flexible electric cord attached to it broke, and the resulting arc ignited fumes in the paint shop. The workman was badly burned, and fled from the room. The night man in the repair shop grabbed a forty-gal. portable chemical engine and wheeled it up to the paint shop, opening the sliding tin clad door in order to get good range on the fire. He used the tank for a few minutes but found the fire was getting too hot, and coming back out on him, so he dropped the chemical hose and rushed to the telephone sending in a still alarm.

Engine Co. No. 1 and Ladder Truck No. 1 were immediately dispatched to the fire, arriving within three minutes of the time the alarm was received.

Upon arrival the fire was still largely confined to the paint shop but was coming out of the sliding door and creeping up toward the ceiling.

Suggested Method of Handling the Fire

Three major problems faced the first companies at the fire: Preventing the fire from getting through the



brick walls of the paint shop into the auto repair shop; ventilating the roof of the paint shop and getting lines in operation; preventing fire from entering the four story hotel adjoining garage building.

As the paint shop is 50 x 50 feet approximately, it is going to be quite a task to handle this fire, if it has secured considerable headway. Hence, if there is danger of fire getting over the auto repair shop, it is best policy to transmit a general alarm at once.

The assignment of lines of the first alarm companies will be as follows:

Engine Co. No. 1 at hydrant No. 3: stretch two lines, one to the State Street entrance of the paint shop, and the other by way of ladder, placed by ladder company, to the roof of the paint shop.

Members of ladder company immediately open main entrance to auto repair shop on State Street, and by using six foot hooks pull closed the tin clad sliding door in the paint shop which has been left open by garage

employee. This will temporarily hold the fire from gaining headway in the auto repair shop.

Two members of the ladder company go at once to the roof of the paint shop and open up, to let out the pent up heat and fire. The line on the roof from Engine Co. No. 1 will be able to cover the four story hotel building for a short while, at least.

Have members of engine company, with the aid of members of ladder company stretch in a hydrant line from hydrant No. 4, this line to enter main repair shop doorway on State Street and wet down cars and other materials in immediate danger.

After this line is in operation and if members of truck company are free, have them go to four story hotel and make sure that fire has not entered this building, and that all guests are out as well.

In the meantime, a general alarm will have been transmitted bringing out Engine Cos. Nos. 3, 2 and 4, and Truck Co. No. 2.

Station Engine Co. No. 3 at hydrant No. 2, and stretch in a single line through the auto repair shop to wet down under roof around paint shop and also to kill any fire which may be burning in shop.

Place Engine Co. No. 2 at hydrant No. 1, and stretch in two lines, one to go to doorway on west wall of paint shop and operate on the fire in the shop. The other line to go to the roof of the auto repair shop and assist covering exposures on four story hotel. Engine Co. No. 4 to be placed at hydrant No. 4, and use hose line already in operation from this hydrant as well as another line, if necessary, for light work.

It is believed that the above assignment of lines will be well able to hold the fire, to extinguish it in the paint shop, and to prevent its entering the hotel building or gaining a hold in the auto repair shop.

Notice that in this method of operation the fire was first localized to the paint shop by having the sliding door closed. Then the shop was ventilated at the roof, after a line was ready to cover the exposure to the four story hotel building.

Additional lines, as they were put in service, completed this method of operation, by further covering the four story hotel building, covering the interior of the auto repair shop and operating on the fire.

Fire Alarm Headquarters Recently Completed in Cleveland

The recently completed manually operated and supervised fire alarm central office in Cleveland, Ohio, is locat d on the second floor of an isolated and fire resistive building which also houses Fire Station No. 28. The office has a capacity of 100 fire alarm box circuits, 20 fire station primary alarm circuits and 20 fire station secondary circuits, making a present capacity of not less than 2,000 boxes. The system can care for 100 fire stations without overloading the circuits. The equipment is designed so that extensions may be made from time to time until the present capacity is more than doubled. The city has also replaced its obsolete fire alarm boxes, some of which have served on the street for more than fifty years with the latest boxes of the non-interfering and successive type. All of the equipment was furnished by the Gamewell Company. The photographs show the exterior and interior of the fire alarm headquarters.

Radio Fire Alarm Tested in Chicago

It has often been proven that the earliest moments at a fire are the ones that really count. In order to reduce the time required for apparatus to respond to alarms, Chicago has tested out a system whereby the calls are sent through a loud speaker at each station. A description of the plan has been prepared by N. Banks Cregier, Supervising Engineer, Chicago Fire Department.

"Alert to maintain the city's unique speed, specialized loud speakers were installed as an experiment in the houses of a number of engine and truck companies of the Chicago Fire Department with the idea of reducing the time of transmitting alarms consumed by the mechanical devices and thus speeding the apparatus on its way to the fire. The result was amazing.

"Conclusive proof of the value of the new method over the gongs, registers, tap-bells and other similar electrical contrivances was demonstrated by a public test held in the heart of Chicago's loop district, and which test was acknowledged as of such emphatic and general interest that it was recorded in every detail by the Fox Film Movietone Company. Box 32 located at Dearborn and Washington Streets was pulled, nothing but the loud speakers being used for transmission of the alarm to the companies called to respond. Engine Company No. 13 with Fire Insurance Patrol No. 1 arrived at the box side by side in the astonishing time of fifteen seconds. The apparatus traveled a distance of 2½ blocks.

"Engine Company No. 40, Truck Company No. 6—the high pressure wagon—two of the most ponderous pieces of the department's equipment, and Chief Anthony Durkin in his car, arrived in a bunch from a distance of 4½ blocks, and the turning of a corner, in 26 seconds. And this run came through dense traffic conditions of one of the busiest metropolitan areas in the world.

"The total and actual time consumed between the pulling of the box and the arrival of the apparatus constitutes the fastest response ever made. It should be born in mind that the test was made under entirely normal conditions, and without prearrangement of any kind, except for the fact that the companies knew a run would be made sometime during the forenoon.

"Chicago has no intent to discard the registers and tap-bells. They will be retained as they are at present indispensable and the indelible means of checking on alarms, but progress now moves them back a peg in the combat of fleeting seconds in the conquest of fire."

New Fire Alarm for S. Greensburg, Pa.—A new fire alarm system is being installed in South Greensburg, Pa.

New Vernon, N. J., Places Pumper Contract—New Vernon, N. J., has purchased a 500-gallon Seagrave pumper.

Haverhill Awaits Fire Apparatus—Haverhill, Mass., is expecting the delivery of Maxim fire apparatus.

Chief Ray Tiller Speaks at Lions' Club—Chief Ray Tiller of Waterloo, Ia., told the local Lions' Club "Fire prevention in large cities is larely a matter of regulatory building restrictions." He advocated the purchase of an additional fire apparatus by the city.

Nevada, Ia., After Traffic Offenders—Nevada, Ia., is after those motorists who persist in interfering with the operations of the fire department. Although there is an ordinance covering this, it has been often violated. But the city is now ready to take action.

WITH THE EDITOR

The Coming I. A. F. C. Convention

One of the most important events of the year, from the standpoint of the Fire Chief, is rapidly approaching. This is the annual convention of the International Association of Fire Chiefs, which takes place at Philadelphia, Pa., on October 17 to 20.

All Chiefs—and this applies equally to the heads of the large metropolitan department and the volunteer unit of the smallest village—should make plans to attend this gathering, if they have not already done so. The time is getting short and those who delay in this matter may find themselves with poor accommodations, as far as the hotels are concerned. Naturally most of those attending will wish to put up at the headquarters hotel—the Bellevue-Stratford—and the prospects are that this hostelry is going to be heavily taxed to take care of all of the visitors.

The practical advantages of attendance at the national gathering of chiefs are so well known that little need be said in regard to them. Aside from the papers, discussions and demonstrations, there is the immense benefit to be derived from the meeting with other chiefs, and the exchange of ideas on the many problems of fire fighting and fire prevention. Such intimate chats are of incalculable benefit, and the convention is the one event of the year which provides this great opportunity for them.

Another benefit which the convention affords is to be found in the exhibits. Here are assembled all of the latest apparatus and devices for the use of the fire department and the extinguishment of fire. The opportunity to study the progress in such matters is worth to the fire chief, his department and the city which sends him to the convention, all the expense which the trip will have cost.

Thus, no chief who wishes to keep in the forefront of his profession and no city which intends to keep its fire department up-to-the-minute can afford to miss the opportunity afforded by the annual convention of the I. A. F. C.

Fire Department Relief Funds Non-Taxable

An important decision, as far as the state of Montana is concerned, and which may constitute a precedent for other states, has just been rendered by the Attorney General of Montana. It is that relief funds of fire departments are non-taxable.

The decision was the result of a request for an interpretation of the law on the subject by the attorney of Dawson County as regards the taxable status of the funds of the fire department of one of the villages in that county. In reply, the Attorney General says: "Section 1998, R. C. M., 1921, exempts from taxation property of cities, towns and municipal corporations. The funds of a fire department relief association are secured partially from taxation, and these taxes are evidently for a public purpose."

This is a question that could well be raised by cities in other states where the law is not absolutely clear on the subject, and if the decision is that such funds are taxable, state associations should make it their business to see that the statutes are changed.

Certainly, funds with such a philanthropic object as the taking care of firemen who have been injured in the line of duty or the families of those who have sacrificed their lives in the public service should not be taxed by the state. Any law providing for such a procedure is unjust and should be repealed.

Fires Confined to Place of Origin

Ninety-eight per cent of the fires occurring in fifty of the principal cities of the United States were confined to the place of origin during 1927. This interesting and important statement is made by engineers of the Continental Insurance Company as a result of a survey recently conducted by them.

That these figures should cover the principal cities of the country is particularly significant. If it applied to only one municipality, or even two or three, it would be interesting as showing the excellent condition of the fire departments of these cities. But the fact that it covers equally so large a percentage of important cities, shows that the fire fighting service of the country in general is on a very high plane of efficiency, both as regards the training of the personnel and the condition of the equipment.

The statement also emphasizes the vast improvements which have taken place in the sciences of fire fighting and fire prevention. For many elements must have combined to bring about such a result. First of all, naturally, it bespeaks a very high order of firemen, officered by men who are thoroughly trained in the technique of their profession. For, in order to attain so uniform a result, these men in command must, of necessity, know what to do under all circumstances at the beginnings of fires, and also must have firemen under them who are trained to obey their orders both promptly and with intelligence.

It also brings out the fact that promptness and quickness of response to the alarm of fire must be the order of the day in these cities, as a well known axiom in fire

fighting is that the first few moments are the crucial ones in deciding whether a blaze is to be a trivial one or a near-conflagration.

Beyond this, the statement shows the great advantage the modern fireman has over his brother of a decade or so ago, in the matter of devices for prompt notification, in motorized apparatus to get him quickly to the scene of the fire, in pumps and high pressure systems to give him ample streams and plenty of water and in improved tools and devices for general fire fighting.

All of these things have worked together to attain the result shown in these statistics. But none of them would be of great avail, if the personnel of the fire departments were not carefully and efficiently trained in the science of fighting fire. To the latter fact must be given a large share of credit for the splendid results shown in the insurance company's figures.

Egyptian Fire Fighters Hold Meet

The fall session of the Egyptian Fire Fighters Association, of which Chief Albert Herring of Murphysboro, Ill., is president, was held in Harrisburg on September 5. The association holds two meetings a year. A parade was arranged at 9.30 a. m.

Chief Herring responded to the address of welcome by Mayor Hawkins. Addresses were made by D. E. Cavender, public health and safety commissioner of Harrisburg, M. L. Legried, state fire marshal, John G. Gamber, ex-state fire marshal, and Frank H. Jones of the Illinois Inspection Bureau. After lunch an address was given by Scerial Thompson on "Past and Present Harrisburg Fire Department and Fire Prevention."

Germany Has Agreed With the Voyagers

Judging from the smiles of Dr. Harry Archer (left) and Chief John Kenlon (center) of New York City, the visit that they made to Brandirektor Walter Gempp of the Berlin fire department (right) has been a most agreeable one. They are here shown inspecting the Tempelhof airdrome.

MAKE ARRANGEMENTS NOW TO ATTEND CHIEFS' CONVENTION

NO Chief can afford to miss attendance at the International Chiefs' Convention in Philadelphia. Now is the time to make your reservations. The headquarters hotel is the Bellevue-Stratford, and the dates are October 17 to 20. Several special trips to and from the convention have been arranged, and you can still take advantage of one of the following:

Southern Regulars, South and West: Special train, leaving Atlanta, Ga., Monday, Oct. 15, 12:05 p. m. Address, P. O. Hebert, Candler Bldg., Atlanta.

New England Association of Fire Chiefs, New England: Special train, leaving Boston, South Station, Tuesday, Oct. 16, 9 a. m. Address, Geo. F. Cobb, 774 Albany St., Boston, Mass.

Pacific Coast Chiefs, Far West: Special train, immediately after Pacific Coast Convention. Address, Jay C. Stevens, Merchants' Exchange Bldg., San Francisco, Cal.

Eastern Regulars, Central and Eastern: Trip to Bermuda after convention only. Address, Frederic E. Benson, care of Eureka Fire Hose Mfg. Co., 50 Church St., New York.

Special Train for New England Chiefs

Arrangements have been made to transport the New England fire chiefs, in a special train, to the Philadelphia convention of the International Association of Fire Chiefs. George F. Cobb, traffic manager of the New England Association of Fire Chiefs, 774 Albany St., Boston, Mass., has made all arrangements, and chiefs who intend to avail themselves of this trip, should communicate with him.

The train will leave the South Station, Boston, on Tuesday, October 16 at 9 a. m.; it will leave Providence at 10.08; New London, 11.47; New Haven, 1.00 p. m.; Bridgeport, 1.28 p. m., and will arrive in Philadelphia at 5.35 p. m.

Reservations can be made at the Bellevue-Stratford Hotel, which charges five dollars a person with two in a room and $3.50 a person with three in a room.

The party will leave Philadelphia, after the convention, Saturday, October 20 at 3 p. m. and will arrive in New York, Saturday, October 20 at 5 p. m. The group will stop at the 44th Street Hotel. They will leave New York for the return trip, Sunday, October 21 at midnight and will arrive in Boston, October 22 at 7 a. m.

Expense of parlor cars, sleepers, Pullman reservations, meals and tips on train both ways has been estimated at ten dollars per person. Those going should mail a check for ten dollars to Mr. Cobb to cover train expenses. Railroad tickets should be purchased from the local railroad station and a certificate should be obtained at that time. The reduced fare will apply on the return trip.

Kansas Firemen Meeting Date Changed

The dates of the conventions of the Kansas State Firemen's Association and Kansas Fire Chiefs' Association to be held in Liberal has been changed to October 29-31.

Several out-of-state speakers will address the associations. Rev. Rundin, Wahoo, Nebr., past president of the Nebraska association, and Hugh M. Robinson, service engineer of the Underwriters' Laboratories, will have places on the program. There will also be a demonstration of foam equipment and motion picture films of interest to firemen.

Arrangements are being made to have two or three Pullman cars at Liberal during the convention, so that the cars may be used as sleeping quarters for the delegates.

K. D. Doyle, secretary of the Kansas Associations, Wamego, Kan., would like to know how many of the men will use the Pullman cars, how many are coming by train and those who intend to drive to the meeting. In this way, he will provide sufficient accommodations for all who will attend.

Questions and Answers

NOTE—Readers are invited to send in questions, which will be answered in the order received. Names are omitted from questions unless otherwise specified.

Canton Promotional Questions

To the Editor:

I am enclosing herewith a list of questions asked at a recent captain's promotional examination held in Canton. Will you please publish the answers in your Questions and Answer column and oblige.

A. A. B.

Question 1 (a) State in a general way the duties of a fire captain?

(b) Enumerate ten rules of the department which must be strictly adhered to by all members of the department.

2. What constitutes a completé equipment of life saving appliances for a ladder truck?

3. What attention and care should hose receive to prolong and increase its useful life?

4. What is the cause of spontaneous combustion? (b) Name five substances in which spontaneous combustion frequently occurs?

5. Name five acids which are dangerous to firemen and with which they are likely to come in contact?

6. What is meant by "back draft," what causes it and how can it be avoided?

7. What nozzle pressure is required to give a good fire stream? (b) Name fire causes of defective streams?

8. What nozzle pressure is required on a 1½ inch nozzle to deliver an effective fire stream in a horizontal direction for 75 feet? (b) What are the purposes of using siamese connections? At what point should the siamesing be done and what effect will this have if done at a different point?

9. Assume an engine is operating at constant pressure and that the nozzle on the line is 1½-inch. The nozzle pressure is found to be poor, in what manner can the range of stream from the line be increased without changing engine pressure or hose layout?

10. What is back pressure?

(b) How many pounds pressure will it it take to cause water to rise in the standpipe to the top of the 19th story of a building allowing 12 feet per floor?

ARITHMETIC

1. How many gallons of water will a 50 foot section of 2½-inch hose contain?

2. A cubical tank 10 x 10 x 10 feet is filled with water. How many gallons does it contain?

3. Find the number of yards of carpet required to cover a floor 15 ft. x 21 ft. with carpet 30 inches wide?

4. Multiply 75469 by 316?

Answer 1. In the first place the captain is entirely responsible for his company—their welfare and their actions. It is up to him to see that discipline and efficiency are maintained and that the property of the city is properly looked after; this includes apparatus, building, etc.

It is up to him to keep order and maintain discipline. Instructing the men beneath him in their duties, and preparing rosters of special duty as well as arranging the watch duty are all included in his work. Most fire departments require the captain to make a daily inspection of the company, and monthly inspection of companies and equipment. The captain is also responsible for maintaining records (usually in the form of an officers' journal) wherein are included entries required by department rules and regulations.

The captain is in command at fires until his superior arrives; and it is one of his duties to make a report of each fire, forwarding it to the proper authority as so provided by the rules and regulations.

Other reports which he must make include those regarding sickness of members, accidents to apparatus, injury to men, and violation of department rules and regulations, etc.

(b) The following are rules which are considered necessary and which are, in general, applied in all fire departments: 1. Members shall not commit any breach of the peace; 2. Shall not refuse within thirty days to liquidate any indebtedness incurred for necessaries, nor loan, nor give away any public property; 3. Leave headquarters, fire or other duty, without the permission of the commanding officer; 5. Shall not occupy beds after 7:30 a. m., except when fatigue from night duty or sickness shall make it necessary; 6. Shall not smoke on apparatus floor; 7. Shall not be guilty of conduct unbecoming an officer or gentlemen; cowardice or shrinking from duty, nor in any manner do anything prejudicial to the good reputation, order, or discipline of the department; 8. Shall not engage in altercations under any circumstances; 9. Shall not at any time be under the influence of spirituous, malt, or intoxicating beverages, liquors, drugs or compounds, sufficiently to interfere in any way with the proper performance of every duty; 10. Shall immediately report any accident, sickness, or injury to themselves, to their immediate superiors at the time of its occurrence, stating the cause of the same and the extent of the injury no matter whether slight or serious.

Answer 2. First comes the ladder equipment: aerial ladder, extension ladders, and short straight ladders; pompier ladders; life nets; life line with cannister and gun including arrow line attached to projectile for getting life line to a roof, or other high point; life belts.

Answer 3. Inspect the hose after each fire for burns, exposure to oils, greases, acids, and similar damaging substances.

In handling hose at fires during cold weather take care that hose which is frozen stiff is handled as little as possible. Wait until the hose has been brought back to the station and thawed out before any attempt is made to straighten it out in the wagon or put it in the hose towers or racks for drying.

In using hose at fires make sure that dangerous chafing is prevented—that is, where hose passes over sharp obstructions such as curb stones, etc. This applies particularly where hose is attached to a pumper, and where it is vibrating due to the pulsation of the pump.

Avoid exposing hose to intense heat, if possible, and see that it is kept out of grease and oils as much as possible. Oils pass through the jacket and cause the rubber lining to deteriorate rapidly.

All hose, whether in reserve or in active use must be flushed out at least every three or four months to rejuvinate the rubber lining. After these flushings, the hose must be thoroughly drained and dried so that the jacket will not be left in a wet condition. Take care when filling gasoline tanks on motor trucks or working around batteries not to get gasoline or battery acid on hose. Either one will prove very damaging to the hose—the acid to the hose jacket and the gasoline to the hose lining.

Answer 4. The real cause of spontaneous combustion (better named "spontaneous ignition") is the oxidizing of combustible materials in such a manner that the heat so generated does not escape but it accumulates. As the temperature of the materials thus rises, the rate of oxidization increases, and the amount of heat generated increases. This rapidly increasing process eventually results in the ignition of the material, giving us so-called "spontaneous ignition."

(b) Five substances in which spontaneous combustion frequently occurs are: oily wastes (particularly where linseed or other vegetable oils are present); linoleum or oil cloth waste (made up of pulverized cork and linseed oil); metallic powders, such as aluminum or bronze powders; soft coal, when piled deep; charcoal.

Answer 5. Nitric acid is probably the most common encountered and most dangerous. It gives off fumes which have in many cases proven fatal to firemen.

Sulphuric acid, widely used in industries, is chiefly dangerous on account of its highly corrosive action. It produces severe burns and due to the fact that fire streams, when striking vats of sulphuric acid cause the acid to spatter, this acid is one which has proven extremely troublesome.

Hydrocyanic acid is dangerous because it gives off fumes which are highly poisonous. It is readily detected, due to its characteristic odor of bitter almons. Hydrocyanic acid gas is frequently used in connection with insect and vermin extermination. It is thus particularly dangerous to firemen, who may be called upon to enter buildings which have recently undergone, or are undergoing fumigation.

Picric acid, found in the form of yellow crystals, is not only very poisonous, but highly explosive as well.

Hydrochloric acid. Due to the fact that this acid gives off heavy, dense fumes, which are poisonous, it is quite dangerous for the members of the fire force when working in close quarters. Being shipped in carboys, at a fire it may be found spread over floors due to breaking of carboys, making it doubly troublesome.

Answer 6. By "back draft" is meant the sudden outward rush of air, smoke and heated gases from the doors, windows, etc., of a building which is burning.

The theory of its cause is as follows: when fire has been burning for some time in a building which is closed up, and in which there is a depleted supply of oxygen, fumes, or vapors, are generated, which are combustible. With the opening up of a building after a fire has been burning in this manner for some time, the inward flow of air supplies the oxygen necessary for the combustion of these gases. The moment the fresh air reaches an open flame the gases in the atmosphere are fired, and their sudden expansion, due to the heat created, drives them and the air back outward through doors, windows, etc.

The best means of preventing back draft is to provide plenty of ventilation, preferably by opening up the roof first and then doors or windows below afterward. This permits the unburned gases to pass out through the roof and fresh air to take their place. In the event that some of the gases are ignited by the process of ventilation, the force of the explosion will be very much reduced by having a number of openings through which the expanded gases can escape from the building.

Answer 7. This question is somewhat vague due to the fact that a single pressure is apparently desired. If it had been stated: "What nozzle *pressures*" were required then the answer would be simpler. It is, however, going to be answered in the second form—that is, the nozzle pressures required to give satisfactory streams on different sizes of nozzles.

Nozzle pressures of 40 to 60 pounds on from 1⅛ to 1¼-inch nozzles will give streams which may be classed as good.

For deluge sets, turret pipes, etc., with 1½-inch and larger nozzles, 60 to 90 pounds nozzle pressure is desirable for effective fire fighting.

(b) Five common causes of defective fire streams are: (a) Too much pressure; (b) not enough pressure; (c) damaged nozzle; (d) air leak in line, the air causing the stream to break up upon leaving the nozzle; (e) twist in hose near nozzle.

Answer 8. The usual rule, for calculating nozzle pressures to give specified ranges of streams, is to allow one pound at the nozzle for each foot it is desired that the stream travel. In the case of a stream traveling 75 feet, a nozzle pressure of 75 pounds would be desirable. Actually, this is a little bit greater than necessary to send the stream 75 feet, but in view of the fact that under most fire conditions there will be atmospheric disturbances which reduce the range of the stream considerably, the figure 75 pounds for 75 feet range is conservative and satisfactory.

(b) The purpose of using siamese connections is to reduce friction loss in the lines by slowing up the velocity of travel of the water. This is accomplished by sending water through two or more lines with corresponding reduction in flow over what the velocity would be if the water were sent through a single line. As the friction increases very rapidly with an increase in velocity, slowing up the velocity means a great reduction in friction loss and as a result much more pressure available at the nozzle.

In some cases it would be practically impossible for a pumper to discharge the desired size of stream at the desired nozzle pressure were not parallel lines laid. The siamesing should be done near the fire rather than near the engine. If it is done near the fire, then the benefit of parallel lines for the largest possible distance will be enjoyed, whereas if the siamesing is done near the engine, the lead line will be long and as a result there will be a lot of unnecessary friction loss in this single line and a resulting reduction in the nozzle pressure.

Answer 9. The range of stream can be increased in this case by reducing the size of nozzle. Reducing the nozzle size checks the rate of flow, and this reduction in rate of flow also reduces very largely the friction loss. Reducing the friction loss gives greater pressure at the nozzle and consequently a greater range of stream.

Answer 10. By back pressure is meant the pressure which a head of water exerts against the engine or hydrant which is forcing the water up to a height through a standpipe system, hose, etc.

(b) Nineteen stories at 12 feet per story gives 228 feet elevation. The back pressure per foot of elevation is 0.434 lbs.

Back pressure for 228 feet elevation = 228 × 9.434 = 98.952 pounds per square inch, back pressure at the street level.

ARITHMETIC

Answer 1. The volume of water in the hose may either be calculated directly in cubic feet or cubic inches, and then changed to gallons. In either case the method of solving for the volume is precisely the same. The cross section area of the hose (corresponding to the area of the base of a tank) must first be found, and this area multiplied by the length of the line of hose to determine the volume.

But observe this precaution: If the volume of the contents of the hose to be determined in cubic feet, the cross section area of the hose must be calculated in square feet; if the volume of the hose is to be calculated in cubic inches, then the cross section of the hose is calculated in square inches, and the length of the hose must be taken in inches.

Solving the problem by the second method, the procedure would be as follows: Cross section area of hose = 2½ × 2½ × 0.7854 = 4.90875 square inches. Length of hose is 50 feet, or 600 inches. Cubic contents of hose is then 600 × 4.90875 = 2,945 cubic inches. One gallon of water contains 231 cubic inches. In the 50-foot section of 2½-inch hose there are 2,945 divided by 231, or 12.75 gallons.

Answer 2. Contents of tank would be 10 × 10 × 10 = 1,000 cubic feet. 1,000 cubic feet are equivalent to 1,000 × 7.481 = 7,481 gallons.

Answer 3. The area of the floor = 15 × 21 = 315 sq. ft.

One yard of carpet equals 3 × 2½ feet = 7½ sq. ft.

315 divided by 7½ = 42 yards, the amount of carpet required to cover the floor.

Answer 4. 75,469 × 316 = 23,848,204.

Editor's Comment. The above examination is one which is devoid of "trick" questions and is reasonable and fair to the candidate. The hydraulic questions may appear a little difficult to the candidates in your city, but are considered comparatively simple by departments which have required such questions in examinations for a few years past.

F. F. Dickinson Now Chief of Brockton

First Assistant Chief Frank F. Dickinson, as announced in the last issue of FIRE ENGINEERING, has succeeded the late William F. Daley as the head of the Brockton, Mass., Fire Department. Chief Dickinson has had a long career with the Brockton Department, covering a period of thirty-seven years, thirty-three of which he has been an officer in the unit. He joined the department on June 17, 1891, and was made a lieutenant in 1905. He was appointed to the post of captain in 1909.

Chief Frank F. Dickinson

Coincidentally with the appointment of Chief Daley in 1916, Captain Dickinson was made First Assistant Chief, only one week intervening between the two appointments. Both officers worked hard for the increased efficiency of the department, being ably helped in their efforts by Second Assistant Chief John Murphy, who now becomes First Assistant Chief.

On May 13, the firemanic world was shocked by the news that Chief Daley, an able and popular officer, had been drowned in Moosehead Lake, in Maine. He had joined a fishing party composed of officials of Brockton, and the 43-foot speed boat in which they had embarked on the lake sprung a leak and sank with all on board. Only one of these men survived the accident.

OFFICER KILLED BY EXPLODING DRUMS IN ALCOHOL PLANT FIRE

Chief Evans of New Orleans Hastens with Fire Companies to Aid Algiers, Across River—Three Overcome by Heat—Windows in Homes Shattered

ONE lieutenant lost his life towards the end of the battle in trying to extinguish a fire that started in the alcohol plant of the American Solvents and Chemical Company, several firemen were overcome by the intense heat, and windows were shattered by explosions started by a fire of unknown origin.

Chief John M. Evans

The fire broke out in the morning of August 30, in the plant where 6,500 drums of alcohol were stored. An Algiers company responded and then another call was turned in for more assistance. By the time the additional Algiers companies arrived, the fire was far beyond control.

An emergency call was sent to New Orleans, just across the Mississippi River. Five engine companies were sent over. At that time, Chief Evans of New Orleans was addressing a meeting in the Association of Commerce and he left the gathering to hurry to the blaze. The entire warehouse section was burning when the New Orleans firemen arrived. Explosions were taking place on every side and the blaze was being fed to produce an intense hot flame. When Chief Evans first saw the fire he was doubtful as to whether or not anything could be saved.

Drums of Alcohol Exploding in Air

Although one of the watchers is wishing a drum full speed ahead, it was a flying container like the one illustrated that resulted in the death of a New Orleans Fire Department lieutenant.

A Conception of the Large Amount of Drums Containing Alcohol That Ruptured and Exploded During the Fire

Firemen crouched in ditches beside the warehouse, pulled their helmets over their faces as a protection from the blistering heat, and poured water in an attempt to cool the drums. Three firemen were overcome by the heat as they fought the fire in an alleyway.

Drums were skyrocketing in the air from their different points in the warehouse and the contents from the broken containers were merely more fuel for the flames. Volunteers and firemen were stationed about the building with buckets of water to halt any new blaze from starting.

A 10,000-gallon alcohol tank in the rear of a passageway was discovered to be burning beneath its cover. A hole was cut through roof of the shed and through the iron roof of the tank itself. Water was poured in to dilute the contents and make it less apt to burn. At this time explosions were continuing at about ten minute intervals. At about six o'clock in the evening, long after the fire was believed to have passed the serious stage, an exploding alcohol drum struck a lieutenant in the head.

A motor cycle policeman cleared the way, and a record run was made with the officer to a hospital in New Orleans. Here his condition was found to be serious. He died later.

All available police from New Orleans were sent across the river to aid Algiers in clearing an area of within three blocks of the fire. At that time it was feared that one large 396,000-gallon tank would explode. At the same plant were tanks of ether, benzol and other high explosives.

The fireboats Deluge and the Samson were called to aid from the river side. Their lines were sent in across the levee. Negro workers in the vicinity were pressed into service by the fire department to drag high pressure lines into position.

The firemen were handicapped by lack of pressure, and later in the afternoon word was received the supply of pure water was almost exhausted.

Windows in buildings for blocks around the fire were shattered by the explosion. Several companies continued to pump water on the building long after the fire was believed to be out, in an effort to prevent further explosions.

The alcohol in the plant was valued at $150,000 and the building at $250,000. The building was not very seriously damaged.

WHAT'S BURNING

THE following list includes fires of $25,000 loss and over in the United States and Canada, for the periods designated in the headings. These figures, compiled from telegraphic reports, are based on estimates made at the time, and are subject to latter investigation and consequent revision. Taken as a whole, however, they give an approximately correct view of the losses incurred. The figures represent loss in thousands.

Week Ending September 7

YELLOW SPRINGS, OHIO.—Dormitory at Antioch College.. 40
PITTSTON, PA.—Several business establishments..... 50
ISPEMING, MICH.—Nelson Hotel destroyed..... 30
INDIANAPOLIS, IND.—Plant of Klee & Coleman, Inc..... 50
DETROIT, MICH.—Residence of W. D. McElhinney..... 25
PARIS, TEX.—Paris Compress & Warehouse Co. Whse..... 30
VANCOUVER, B. C.—British Columbia Box Factory..... 40
NEW ORLEANS, LA.—Plant of American Chemical Corp..... 700
EAST SEBAGO, ME.—Douglass Inn destroyed..... 50
NEWARK, OHIO.—Dever & Lindorf Dept. Store..... 40
NEWBURG, N. Y.—DuMond and Gorrie stores damaged..... 50
SALEM, ORE.—Bldg. of Draper Fruit Packing Co..... 50
FULTON, N. Y.—Old Gage and True Bros. Mills..... 80
GRAND MERE, ONT.—City Hall destroyed..... 25
FORTESCUE, N. J.—Several cottages destroyed..... 40
TUPPER LAKE, N. Y.—Dwelling of Mrs. Wurzburg..... 35
SCIO, OREG.—Scio mill and elevator..... 25
LONDON, ONT.—Warehouse of Daly Tea Co..... 25
VANCOUVER, B. C.—Bldg. of Shore, Wallace Co. Ltd..... 65
TILER, IDAHO.—Reynolds Bros. garage..... 30
DAYTON, WASH.—Potlatch Lumber plant destroyed..... 80
BLUE POINT, L. I. N. Y.—Hotel Monterey destroyed..... 80
PLATTSBURG, N. Y.—Omears stables destroyed..... 25
MILWAUKEE, WISC.—Plant of Hill & Hubble Co..... 80
AKRON, OHIO.—Goodyear Plant No. 2 damaged..... 45
BUFFALO, N. Y.—Warehouse of Wm. Heinrich's Sons Co.... 40
LAWRENCE, MASS.—Whse. of Lawrence Grocery Co..... 45

Week Ending September 14

ALTOONA, PA.—Greenwood Service Station damaged..... 25
LANGHAM, SASK.—Canadian National Elevator..... 50
WINNIPEG, MAN.—Shores candy factory..... 25
SANDUSKY, OHIO.—Plant of Barr Rubber Products Co..... 200
JOHNSTON, R. I.—Modern inn destroyed..... 40
COBOURG, ONT.—Yacht Silouette of W. J. Schoonmaker.... 45
CARLISLE, PA.—Molly Pitcher Hotel damaged..... 25
AKRON, OHIO.—Loewenthal Co. warehouse..... 125
MATTOON, ILL.—Mill of B'g Four Elevator Co..... 80
DENVER, COLO.—Several stores, loop market block..... 125
OXFORD, OHIO.—Tallawanda Apts. damaged..... 60
HILLSBOROUGH, CALIF.—Home of W. W. Croker destroyed. 170
OLYMPIA, WASH.—Capitol building damaged..... 45
DAVENPORT, IA.—Bungalow of E. J. Kuemmerle, Harrison Rd. 25
FRESNO, CALIF.—A. Mattel property at Lone Star..... 80
SAN FRANCISCO, CALIF.—Pier of State Harbor Comm..... 80
BRADDOCK, PA.—Two business blocks damaged..... 40
LITCHFIELD, CONN.—Phelps bldg. damaged..... 50
NORTHAMPTON, MASS.—Dudley Hall of the Clarke School... 25
DALLAS, TEX.—Several business bldgs. destroyed..... 400
CHICAGO, ILL.—Bdlg. General Highways System..... 25
FAIRVIEW, KY.—Business section damaged..... 35
CONTINENTAL, OHIO.—Masonic Club and adj. property..... 30
TOBYHANNA, PA.—Main bldg. of Camp Tegawitha..... 40
MURRAY BAY, CANADA.—Manoir Richelieu destroyed..... 425
TUMWATER, WASH.—Deschutes River saw mill..... 35
SAN JOSE, CALIF.—Whse. of San Jose Transfer Co..... 210
OROVILLE, CALIF.—Business property destroyed..... 80
ST. LOUIS, MO.—Rogers Grain elevator damaged..... 65

Large Lumber Yard Destroyed in Sumner

Six million feet of dressed lumber were destroyed in a fire that destroyed the Pacific Lumber Agency in Sumner, Wash., and endangered a 28,000-gallon gasoline tank nearby.

When the firemen responded the plant was entirely envolved. Calls for assistance were sent immediately to Auburn, Tacoma and Puyallup. The first outside aid to arrive was the Puyallup pumper and they ran a line to the far end of the lumber yard. The Auburn company entered the office of the oil company where a large number of oil cans were stored. A number of the men were almost overcome by the heat and smoke. Many trucks in the garage were salvaged.

At an early stage in the fight, when it appeared as though the fire was under control, the water main at the plant broke and all pressure was cut off north of the fire. Although this placed the plant in jeopardy, it saved two houses nearby. The spray from the broken main wetted down the buildings.

The first pumper sent from Tacoma broke down at North Puyallup and the arrival of the second pumper was all that saved the blaze from sweeping into the planing mill and other factories. Watchers were sent to the roofs of all factory buildings to prevent the fire brands from starting other fires. All alleys were patrolled.

Refreshments were served to the firemen by the Salvation Army and persons living nearby.

Four railroad companies lost thirteen cars, and three small homes were destroyed. The total loss has been placed at $225,000.

Sulphur Can Become a Bad Actor

There are no regulations that say that sulphur is a dangerous substance, but one repairman knows that there are many pleasanter places to be than close to a pile of sulphur when ignited.

Sulphur is a harmless yellow powder. But when ignited, it forms a gas with a penetrating, gagging odor. A large amount of sulphur dioxide is shipped commercially in containers to be used as a working fluid for refrigerators or for certain bleaching operations. And when sulphur burns, there can be no question about it. First the substance melts, then it burns freely with a bluish flame. The fact that it melts in contact with heat may result in a transfer of the actual fire from the point of origination to a remote place.

A certain steel gondola full of bulk sulphur was found to be in need of repairs. Riveting was necessary. While doing the job, the repairman plunged a hot rivet into the sulphur, promptly setting fire to the substance. The man was wearing goggles as a protection for his eyes, but the goggles proved ineffective as a gas mask. For the next few moments, this laborer had anything but a happy time trying to offset the effect of sulphur dioxide on his eyes. He was not injured but he learned enough to respect certain facts. He discovered that it pays to remove all traces of sulphur when it is necessary to work near it, and that a hot rivet or cigarette butt should never come in contact with material. The data is taken from an article in the Bureau of Explosives bulletin.

N. F. P. A. Offices to Move

The executive offices of the National Fire Protection Association will move from 40 Central street, Boston, Mass., to the Public Service Building in Boston, now being completed. The new offices will be double the space occupied previously. The change in address will become effective November 1.

Siren Installed in W. York, Pa.—A fire siren has been installed at West York, Pa.

Seaside, Orc., Rejects Bids—Seaside, Ore., has rejected bids received to install a fire alarm and police signal system.

Camas, Wash., May Buy Apparatus—Chief E. Reed of Camas, Wash., has been inspecting fire apparatus as the city intends to buy apparatus at an early date.

Montana Relief Funds Not Taxable—Funds of fire department relief associations in Montana were held to be non-taxable in an opinion handed down by Attorney General Foot.

Asks Pay for Kirkland, Wash., Men—Chief Williams of Kirkland, Wash., has appeared before the council and asked that the volunteer firemen receive some compensation.

Another Frame Summer Hotel Destroyed by Fire

Every summer brings with it its toll of frame constructed hotels that are destroyed by fire. The Monterey Hotel at Blue Point, N. Y., on the south side of Long Island, was damaged by fire. It was the largest hotel in that section. At the time of the fire, twenty-five guests were in their rooms, and they were forced to flee to safety. The fire was aided by strong winds that were blowing at that time. The entire village was seriously threatened before the blaze was brought under control.

OFFICIAL PROGRAM OF I. A. F. C. ANNUAL CONVENTION IS ISSUED

Synopsis of Technical Subjects and Discussions — at Philadelphia — Travel and Railroad Details — Hotel Rates

THE following official program of the fifty-fifth annual convention of International Association of Fire Chiefs, to be held at the Bellevue-Stratford Hotel, Philadelphia, on October 17 to 20, has just been issued from the office of Secretary J. J. Mulcahey:

From the President to the Members:

The fifty-sixth annual convention of the International Association will be held this year at Philadelphia, Pa. Headquarters will be in the Bellevue-Stratford Hotel and the date will be October 17 to 20, inclusive.

An unusually large attendance is expected as it is within easy reach of all and adjacent to the great Metropolis, the City of New York and to that all year around sea shore resort, Atlantic City, N. J., either is about two hours ride by electric or steam railroad.

Chief Davis, his Citizens Committee and all the people of this historic city where the Constitution of the United States was born await your coming. They have arranged a wonderful program for your reception, and educationally, the trip will be well worth while.

The Eastern District Association of Fire Chiefs will precede the International, holding their initial convention of two days, October 15 and 16. Their opening session will be held in the Ball Room of the Bellevue-Stratford Hotel at 10 a. m., October 15, with a business session in the afternoon.

On Tuesday, October 16, they will hold a business session, and on adjournment there will be a Firemen's Parade, including various Volunteer Organizations.

Wednesday, October 17

Opening exercises of the International Association of Fire Chiefs' Convention, in the Ball Room, Hotel Bellevue-Stratford, Broad and Walnut streets, at 10 a. m.

11 a. m., Memorial Service.
12 noon Official Photograph.
2 p. m., Continuous Business Session.

Thursday, October 18

This will be Exhibitors Day. Arrangements are made to permit opportunity to exhibitors to display any special features they have for the occasion. Plans will be made for the following demonstrations:

City Fire Boat Drill.
High Pressure System—Race street.
High Pressure System—Fairhill.
Water Tower Test.
Foamite.
Fire Freeze, etc.

Topics for Discussion on All Days

Standpipe Equipment for High Buildings, Chief Kenlon, New York City.
Educating the Youth of the Country in Fire Prevention Methods, Jay W. Stevens, Executive Secretary.
Printing, Vari-Colored Tints and Dry Cleaning Establishments, Frank J. McAuliffe, Chicago, Ill.
Defective and Dangerous Construction in Buildings, Chief Davis, Philadelphia, Pa.
Extinguishment by Various Types of Extinguishers, Chief Charlesworth, Providence, R. I.
Standard Physical Qualifications for Candidates for the Fire Department Service, Department Surgeon, Philadelphia, Pa.
Salvage and Conservation of Property, Chief Brosnan, Albany, Ga.
Fire Detecting Systems, Walter R. Hough, Baltimore, Md.
The Importance of Drill School and Fire College Work, F. A. Murray, New Haven, Conn.
Refrigeration, Fremont Wilson, New York City, N. Y.
Address by Engineer from Champion Spark Plug Co.
Round Table Discussion.

Salvage Corps Officers' Association

The Salvage Corps Officers Association of the United States and Canada will meet in conjunction with us and wish to announce to their members that:

Harry Hoffman will deliver the "Address of Welcome" and will be glad to make reservations for the visiting Patrol Chiefs.

James O'Donnell will express his ideas on the "Salvage of Stock in Basements."

Chief Blake of Rockford, Ill., has promised to tell about the benefits of "Salvage Work Performed by Fire Departments."

Frank McAuliffe is going to defend his recently printed "Salvage Corps Book of Rules."

President Schwank, if sufficiently recovered, will testify as to "Recent Advances in Salvage Methods."

Secretary Ashmead will describe the work of the Salvage Committee of the N. F. P. A., of which he is Chairman.

A room is provided for their purpose and it is expected that copies of these papers will be in the hands of all the members previous to the meeting so that ample time will be had to prepare for discussion.

Railroad Fares

A reduction of one and one-half fare on the certificate plan will apply for members and dependent members of their families for this convention from the following sections.

New England Passenger Association—New England.

Central Passenger Association—Territory west of Buffalo, Niagara Falls, Salamanca, Pittsburgh, Wheeling, Parkersburg and Kenova to and including Chicago and St. Louis, and north of the Ohio River, including Cincinnati, Louisville and Cairo.

Southeastern Passenger Association—Territory south of the Ohio and Potomac and east of the Mississippi River.

Western Passenger Association—Territory west of Chicago, Peoria and St. Louis, and east of Washington, Oregon and Nevada.

Southwestern Passenger Association—Territory southwest of St. Louis, including Texas, Arkansas, Oklahoma, Missouri (south of Missouri River) and Louisiana (west of the Mississippi River).

Trans-Continental Passenger Association—Pacific Coast and other far Western territory not otherwise covered above.

Canadian Passenger Association, Eastern Lines—Canada (east of and including Armstrong and Port Arthur, Ont.).

Canadian Passenger Association, Western Lines—Canada (west of Armstrong and Port Arthur, Ont.).

1. Tickets at the regular one-way tariff for the going journey may be obtained on any of the following dates (but not on any other date); October 13 to 19. Be sure that when purchasing going ticket you request a CERTIFICATE. Do not make the mistake of asking for a "receipt."

2. Present yourself at the railroad station for tickets and certificates at least 30 minutes before departure of train on which you will begin your journey.

3. Certificates are not kept at all stations. If you inquire at your home station, you can ascertain whether Certificates and

This Cigar Lighter Worked — But It Worked Too Well

Stories are common of the cigar lighters that refused to operate. But in Hollywood, Cal., there is a demolished building as evidence of what can happen when such a small thing does function. While inspecting a bungalow which was to be rented, some man snapped his lighter. A second later the place was a total wreck and the visitors were caught in the debris. Houses in the immediate section were damaged by the blast. A previous tenant had permitted gas to escape from a heater, and the accumulated gas caused the trouble. Three sides of the house and the roof were shattered.

through tickets can be obtained to place of meeting. If not obtainable at your home station, the agent will inform you at what station they can be obtained. You can in such case purchase a local ticket to the station which has Certificates in stock, where you can purchase a through ticket and at the same time ask for and obtain a Certificate to the place of meeting.

4. Immediately on your arrival at the meeting present your Certificate to the indorsing officer, Mr. George F. Cobb, Traffic Manager, as the reduced fares for the return journey will not apply unless you are properly identified as provided for by the Certificates.

5. It has been arranged that a Special Agent of the carriers will be in attendance on October 18 and 19, from 8:30 a. m. to 5:30 p. m. to validate Certificates. If you arrive at the meeting and leave for home again prior to the Special Agents arrival, or if you arrive at the meeting later than Oct. 19, after the Special Agent has left, you cannot have your Certificate validated and consequently you will not obtain the benefit of the reduction on the home journey.

6. So as to prevent disappointment, it must be understood that the reduction on the return journey is not guaranteed, but is contingent on an attendance of not less than 250 members of the organization at the meeting and dependent members of their families holding regularly issued Certificates obtained from Ticket Agents at starting points, from where the regular one-way adult tariff fares to place of meeting are not less than 67 cents on going journey.

Certificates to children at half fares will be counted the same as Certificates held by adults.

7. If the necessary minimum of 250 Certificates are presented to the Special Agent, and your Certificate is duly validated, you will be entitled up to and including October 24, 1928, to a return ticket via the same route over which you made the going journey at one-half of the one-way tariff fare from the place of meeting to the point at which your Certificate was issued.

8. Return tickets issued at the reduced fares will not be good on any limited train on which such reduced transportation is not honored.

9. No refund of fare will be made on account of failure to obtain proper Certificate when purchasing going tickets, nor on account of failure to present validated Certificates when purchasing return ticket.

Hotel Tariff

Bellevue-Stratford.
Rooms without bath—Single room $4 to $6. (Additional charge of $2.00 for each extra person in room). Rooms with bath—Single room inside $5 to $6. (Additional charge of $2.00 for each extra person). Single room and bath with outlook $7 to $9. Double room and bath with outlook $9 to $11. Room with twin beds and bath (open court) $8 to $9. Large double room with twin beds and bath $10 to $13. Parlor, bedroom and bath $20 to $25. Parlor, bedroom and bath with private hallway $23 to $30. Two rooms and intervening bath, open court (two persons) $9. (Additional charge of $2.00 for each person in room). Two outside rooms with intervening bath (two persons) $13. (Additional charge of $2.00 for each extra person). Room for chauffeur, private maid or valet (meals included) $7.

Ritz Carlton Hotel. Broad and Walnut Sts. Located on opposite side of street from Headquarters.
Single room $6, $7, $8. Double room $10 to $18. Parlor and Double bedroom $20. Parlor, Double and Single bedroom $25.

Adelphia Hotel. 13th below Chestnut Sts. Located two squares from Headquarters.
Single room $4, $4.50, $5, $6. Double room $7, $8, $9, $10.

Hotel Walton. Broad and Locust Sts. Located one square from Headquarters.
Single room $2.50. Double room $4, without bath. Double room $5. Single room $3. Twin beds $7 with bath.

Sylvania Hotel. Locust and Juniper Sts. Located one and a half squares from Headquarters.
Large outside Single rooms, with bath $4. Large outside Double rooms, with twin beds and bath $6.

Benjamin Franklin Hotel. 9th and Chestnut Sts. Located six Squares from Headquarters.
Single room $4.50, $5, $6, $7. Double room $7, $8, $9, $10.

Greens Hotel, 8th and Chestnut Streets. Located seven squares from Headquarters.
Single room, without bath, $2 and $2.50. Double room, without bath, $3.50 and $4. Single room, with bath, $3.50 and $4. Double room, with bath, $5 and $6.

Robert Morris Hotel. 17th and Arch Streets. Located seven squares from Headquarters.
Single room, $4, $3.50 and $3. Double room, $6 and $5. All outside rooms with bath.

Hanover Hotel, 12th and Arch Streets. Located five squares from Headquarters.
Single room, $2 up, without bath. Double room, $3.50, without bath. Single room, $3, with bath. Double room, $5, with bath.

Vendig Hotel. 13th and Filbert Streets. Located four squares from Headquarters.
Single room, $3, $3.50 and $4, with bath. Double room, $5, $6 and $7, with bath.

Windsor Hotel. 1217 Filbert Street. Located five squares from Headquarters.
Single room $2, without bath. Double room, $3, without bath. Single room, $2.50 up, with bath. Double room $4 up, with bath.

Lorraine Hotel. Broad and Fairmount Ave. Located eight squares from Headquarters.
Single room, $2.50, without bath. Double room, $3.50, without bath. Single room, $3, with bath. Double room, $5, with bath. Convention rates.

Attention of members is directed to Article V, Paragraph A and Paragraph B in re. Membership fees: "Annual Dues Two Dollars ($2). With an additional convention registration fee of Five Dollars ($5)." Many members are under the impression that the Five Dollars paid at the convention is in full payment of all obligations due, no doubt to not noting change in constitution, this is cited for their information.

District Association Secretaries are requested to submit reports of their standing and activities to increase the membership during the past year.

N. J. Chiefs to Meet in Atlantic City

The annual conventions of both the New Jersey State Firemen's and the New Jersey Fire Chiefs' Association will be held in Atlantic City, Steel Pier this month. The firemen will meet on September 21 and 22, and the chiefs will hold their annual meeting on the evening of September 21.

The New Jersey State Firemen's Association has just issued a pamphlet containing reports of the Executive and Legislative Committees.

Improvements Made in Dallas Department

A number of major changes have taken place in the Dallas, Tex., fire department, sponsored by Clarence S. Parker, police and fire commissioner.

The chief's salary has been increased from $3,600 to $5,000 a year; firemen were granted a flat increase of ten dollars a month, bringing their pay to $140 a month.

Some time in December the city will have a new central fire station erected at an approximate cost of $300,000. It is a three story building with a frontage of 150 feet and a depth of ninety feet. Part of the building will be separated by a solid fire wall and used for a central fire alarm office. That system will be changed from an automatic to the straight manual. The Gamewell Co., now has a contract to furnish over $75,000 worth of major equipment for the new fire alarm office.

It is probable that the new central fire station will house an aerial truck, two engine companies, service truck, salvage company, water tower, chief's car, assistant chief's car and district chief's car. The first floor will be used for apparatus, day officer's quarters and a drying room. On the second floor are rooms for the chief, secretary, private bedroom for the chief and assistant chief, dormitory, locker room, bath and dressing room. On the third floor is the auditorium and assembly room, kitchen and dining rooms and two guest rooms with bath. The fire alarm system will occupy a space thirty-six by ninety feet in the basement, and on the first and second floors.

In the near future, a new salvage company will be added. The present arson squad is doing effective work and the fire commissioner is trying to have the present arson laws revised.

The department has twenty-three fire stations and a personnel of 386 men. The city has made an appropriation of $781,162 with which to operate the department this year.

Gladstone, Ore., Buys Apparatus—The new organized fire department in Gladstone, Ore., has purchased a Graham Brothers truck equipped for fire-fighting.

Cliffside Park, N. J., to Have Fire Alarm—The Borough of Cliffside Park, N. J., will install a fire alarm system. Forty fire alarm boxes will be installed in various sections of the borough.

Eastchester Department to Have Field Day—The Eastchester Fire Department comprising the villages of Tuckahoe, Bronxville and outlying sections, will hold a field day on September 22 at the Bronx River Parkway Field.

Should Apparatus Speed Be Reduced?

(*Continued from page* 812)

I maintain that the Chiefs, in arguing for equipment, should maintain some ratio as to property values and population. It was the standard in early times that they would have one uniform man to every 1,000 population. The cities have gotten away from that, and have bought fewer apparatus and reduced their personnel down to the point where it is a common thing to see apparatus go into action with four men in a great many of our cities.

The public which you serve in your localities feel that they have as much right on the highways, as taxpayers, as has the vehicle which they pay for, in responding to alarms. I recently heard a city official very seriously argue that all apparatus should even observe the traffic signals in responding to alarms. He witnessed a very close call and immediately went to the Council Chamber and had an ordinance passed, setting the speed at a very low maximum. The ordinance was drawn so that the fire department had to comply with traffic regulations and stop at all red light signals. We were able to go before the Council and revise that to some extent; however, they did keep the speed limit.

Some cities have a speed limit of twenty miles an hour. When I was in New York a short while ago, I saw apparatus going to a fire in the congested part of the city. I know that in my balmy days I could have kept pace on foot with the speed they were making. However, they arrived on the scene, whole and ready to go to work. I think that was a pretty sound policy in a city as large as New York. The records show that while their fire losses are away up, they are not high in proportion to population and property values involved.

Strict Discipline Necessary

The fire department is the finest military organization in the community in which you live. It has as much right to pass semi-military rules in disciplining its members as the Navy or Army have to discipline their men or carry out the plans which they have laid down for the class of work they do. You will find in those cities where discipline is enforced, where the men are reduced in rank for violation of orders, that that department ranks high among the cities of the country. It is a local situation which depends upon the quality of the man at the head of the department. If you have a man who is care-free and wants to be a good, popular fellow individually, if he does not enforce discipline in his organization he is not a "good fellow," when it comes to protecting life and property.

Your paramount duty is to protect the lives of the people, not only in burning buildings, but also pedestrians upon the street. I appeal to chiefs to give this some serious thought and to map out a policy placing the responsibility for accidents. Get a capable man and hold him responsible, that the machine he operates shall be preserved.

Make Driver Responsible for Apparatus

I have a very small department. I have today on my machines the same drivers I put there nine years ago. In going to a fire recently, located 2.13 miles away, one of the men said to the driver, "You have a good open street; why not step on it"? The driver, replied, "Mind your own business. I will be whole when I get there." He realized that he had eight men on that machine, and he knew that I expected him to take it to the scene of the fire and do the job he started out to do. He knew that if he met with an accident, he was going to be removed from driving that apparatus. I believe that a strict man in the department, who is fair, will get better loyalty than the man who is lax. When a man has an accident, his first thought will be, "There are no rules to govern this situation." If you have laid down the law to him, he will see that you have promulgated those laws for his benefit and he will assume full responsibility for the results he has obtained.

Discussion of the Paper

PRESIDENT MCNULTY—Chief Tunney, have you any restrictions on the speed limit in your city?

CHIEF TUNNEY—Twenty-five miles an hour.

PRESIDENT MCNULTY—Is that in the resident section or the business section?

CHIEF TUNNEY—Out on the boulevards, we leave it to the driver, but in the congested districts it is twenty-five miles an hour.

PRESIDENT MCNULTY—Chief McMillan, have you any speed limit to your apparatus?

CHIEF MCMILLAN—In my town, I use discipline in governing the speed of my apparatus. Just recently I had one of my captains exceed the speed limit on Riverside Avenue. I had to make fifty-six miles an hour in my buggy to overtake him. When I arrived at the fire, I called his attention to the speed limit and he admitted that he had exceeded that limit. I didn't reduce him right then and I haven't reduced him yet, but I told him in plain English that the next time I caught him exceeding the speed limit I would reduce him; that I would take him off the seat. I believe that every man in my department knows that when I tell them I will do a thing, I will do it. Of course, I never let personalities mix with business. I may like one man more than another, but when it comes down to the business of the city and of the Fire Department, I let personalities take a back seat.

As has been said here, in the case of speed limits and traffic conditions, in this day and time there are too many people driving automobiles who have no right to drive them. For instance, in my city about five or six months ago, we were responding to a downtown alarm. The alarm was within half a block of headquarters. I arrived at the scene of the fire and saw that it didn't amount to much and I returned to headquarters. I got a message there that No. 2's engine in coming down had had a collision about a block and a half north of headquarters. I went around to the corner of Duvall and Main Streets and found that an automobile was locked tight with No. 2's engine. The cause of the collision was this. Duvall being a west traffic street—that is, traffic must go west—and a one-way street, there were five machines lined up, headed west, on the red light. Just about the time No. 2, going south on Main street, came along, the light changed. There was a man in the fifth car who was absolutely deaf. I have known him for twenty-five years and I have never known him to hear anything, and yet he was taken to Police Station, examined, and given a permit to drive an automobile. The red light changed and he dashed out from behind these four cars and attempted to cross the street, and No. 2 came along and struck him. Luckily, No. 2 was obeying my rule and using every precaution in crossing

They Are Headed for New York

This bunch of huskies is the Los Angeles, Cal., Fire Department football team in the making, engaged in practice work. A football game has been arranged between teams of Los Angeles and New York fire departments for the championship of the country. The game has been arranged for the Polo Grounds, New York City, on October 21. The squad in Los Angeles turn out now for daily practice.

this street, because we have no regulation prohibiting fire apparatus moving when the red light is against it. We take a chance, but we use extra precautions. For instance, if we come to a red light and are running at a pretty good speed, we are supposed to slow down in crossing the intersection, if the red light is against us. Those are the conditions in my town, and it looks as if it is almost impossible to alter them, but we can cut our speed down to twelve miles an hour, as the law reads, when we are responding to a fire alarm.

My town is fifteen miles long and five miles wide. It covers about thirty-seven square miles of territory, and it has grown so fast that at the present time fifteen engine companies would be a conservative, actual estimate, and six trucks. We should have at least eighteen engine companies. We now have eleven engine companies and six trucks. The whole downtown district is covered by a high-pressure system, independent of the regular domestic system.

I think that all departments of the city government should cooperate with the Chief of the Fire Department in enforcing the traffic laws against the general public.

I believe personally that there are at least fifty per cent. of the people driving automobiles in this country who have no business at the wheel. You take a man or a woman who is examined at police headquarters and given a permit to drive a car, they are all right until an emergency comes, but when the emergency comes they lose their head and you don't know what they are going to do. The closed automobile has been a great menace. You can ring your bell or sound your gong all you please, but you have to run right up against them before they will budge an inch out of the way.

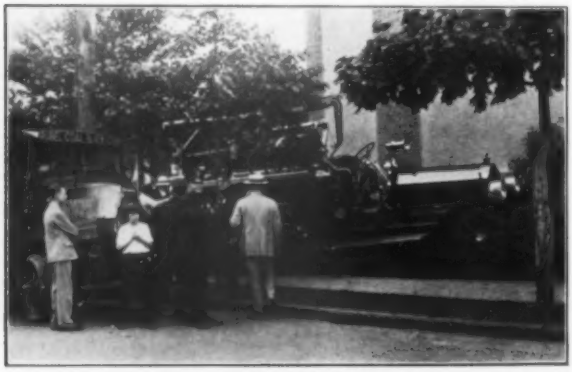
Unfortunately, we don't have the co-operation between the Police Department and the Fire Department that we should have. We have a fire in the retail district and if it amounts to anything, we usually find from ten to one hundred automobiles congregated around the fire as spectators. In many cases I have to ask the police to move the people back so we can fight the fire in an efficient manner. That is one thing that I believe the city should see is properly regulated.

In some cities, they have a regular fire squad, which responds to the alarm and ropes off a block or two blocks, or whatever is necessary, in the fire zone. In that manner, they give the Fire Department a chance to work as they should work. I believe that the closer the two Departments work together the better our traffic conditions will become. I believe that it will promote efficiency and the safety of those that are on the apparatus and those that walk the streets.

It seems to me that the average man who drives a car believes that the man who is walking has no right on the street at all. I have made speeches over the radio. I have talked to several different organizations on "Safety," which takes in the whole matter of traffic and zone laws. It seems to me as if the fellow who is walking the street and cannot drive a car must get off the earth, because a fellow comes along in an automobile and wants to make the street a speedway.

CHIEF BOYD—In our town, we have a limit of twenty-five miles in the business district, and take a chance afterwards.

Squad Wagon Soon for Albany, N. Y.—Albany, N. Y., fire department will soon have a squad wagon equipped with various lifesaving appliances, to answer all alarms.



New York Fireman Injured in Apparatus Crash

One fireman was injured and eight others were badly shaken when fire apparatus and a coal truck collided in Brooklyn, N. Y. The apparatus was thrown against the side of a nearby house.

Pacific Chiefs Complete Their Program

Announcements have been issued of the list of speakers and other events arranged for the thirty-fifth annual convention of the Pacific Coast Association of Fire Chiefs to be held in Sacramento, Cal., October 1-6. Never has anything so complete been considered. A large amount of valuable information is crammed into the few short days of the gathering. The sessions start as early as seven o'clock in the morning and continue until eight or nine o'clock in the evening. The following is the program in full:

Monday, October 1

12:00 m.—Safety Luncheon, Sacramento Hotel.
1:30 p. m.—First Aid Contest, supervision of Chief E. F. Coop, 1st Vice-President, Pasadena.
8:00 p. m.—Get-Acquainted Party and Dance at Auditorium. Informal.

Tuesday, October 2

7:00 a. m.—Exhibition Drill by Sacramento Fire Dept.
7:30 a. m.—Exhibition Drill by Stockton Fire Dept.
8:00 a. m.—Automatic Sprinkler Demonstration.
9:30 a. m.—Music by Sequoia High School Band of Redwood City—Auditorium.
9:40 a. m.—Singing by Honorary Chief Jimmie Smith.
9:50 a. m.—Community Singing.
10:00 a. m.—Address of Welcome—Mayor Conley, Sacramento. Response by Chas. Swanson, Chief, Everett, Washington. Introduction of distinguished guests. President's Address. Adjournment.
11:00 a. m.—Memorial Service.
Address by Chaplain John H. Schively and representative of Ladies' Auxiliary Quartette.
12:00 m.—Official Photograph.
1:00 p. m.—Visit to Exhibit Hall.
1:30 p. m.—Special Feature by an Exhibitor.
2:00 p. m.—"History and Evolution of Fire apparatus and Firefighting," Fred Shepperd, Managing Editor of FIRE ENGINEERING, New York City.
Meeting Ladies' Auxiliary, Little Theatre (Auditorium).
2:30 p. m.—"Water Supply and Distribution," S. B. Morris, Chief Engineer, Water Department, Pasadena.
3:00 p. m.—"The New Uniform Building Code," J. E. Mackie, Manager and Secretary, Pacific Coast Building Officials' Conference, Long Beach.
3:30 p. m.—"Selling the Fire Department to the Public through the Public Relations Department," Ralph J. Scott, Chief, Los Angeles.
4:00 p. m.—"Fire Prevention Educational Work," F. W. Roberts, Fire Marshal, Portland, Ore.
4:20 p. m.—"Value of Special Fire Prevention Campaigns," Frank C. Kispert, Fire Prevention Engineer, Oakland.
4:40 p. m.—"Motion Picture Theatres, Film Storage, etc.," Captain V. E. Pieriet, Fire Prevention Bureau, Los Angeles.
6:00 p. m.—Dinner, Travelers Hotel. Everyone welcome.
7:30 p. m.—"Regulating Dry Cleaning Establishments," Jay W. Stevens, California State Fire Marshal.
8:00 p. m.—"Correcting Electrical Hazards."
8:20 p. m.—"Making a Fire and Water Report," L. S. Bush, Fire Prevention Engineer, Board of Fire Underwriters of the Pacific, San Francisco.
8:40 p. m.—Discussing Topics of the Day at Round Table Meeting. (Taken up in order).

Wednesday, October 3

7:00 a. m.—Exhibition Drill by Santa Barbara Fire Dept.
7:30 a. m.—Exhibition Drill by Modesto Fire Dept.
8:00 a. m.—Automatic Sprinkler Demonstration.
8:45 a. m.—Music by the Pasadena Fire Dept. Band and Community Singing.
9:00 a. m.—"Effective Methods of Fire Prevention Inspection," Edward Grenfel, Chief, Portland.
9:20 a. m.—"Firefighting—Above Ladder Heights," George Mantor, Chief, Seattle.
9:40 a. m.—"Firefighting—Proper Ventilation," Thos. R. Baird, Superintendent of Fire, Santa Barbara (Demonstration).
10:00 a. m.—"Firefighting—Ladder Work," Robert B. Rogers, Battalion Chief, Seattle.
10:20 a. m.—"Firefighting—Oil Fires," B. A. Moeller, General Petroleum Corp. (Motion Pictures).
10:40 a. m.—"Automatic Sprinklers," Roy Coon, Engineer, Board of Fire Underwriters of the Pacific (Demonstration).
11:00 a. m.—"Automatic Operation of Chemical Extinguishing Agents," Maynard Laswell, Los Angeles.
11:30 a. m.—"Value of Fire Schools or Colleges," Samuel Dodd, Asst. Chief, Los Angeles.
12:00 m.—Buffet Lunch—McKinley Park, Sacramento Fire Dept.
1:00 p. m.—Visit to Exhibit Hall.
1:30 p. m.—Special Feature by an Exhibitor.
2:00 p. m.—"Engineering Service of the National Board of Fire Underwriters," Robert Andrews, Asst. Chief Engineer, San Francisco.
2:30 p. m.—"The Chemistry of Combustion and Its Application to High Pressure Streams," Wallace MacGregor, Berkeley.
3:00 p. m.—Underwriters' Laboratory Service."

3:30 p. m.—"Oil Burning Equipment," Burt Delaney. Oil Burners Association, San Francisco.
4:00 p. m.—Discussion of Topics of the Day. (Taken up in order).
6:00 p. m.—California Chiefs' Get-Together Dinner—Senator Hotel. Everybody welcome.
7:30 p. m.—Master Mechanics' Meeting—Ed. Henry, Master Mechanic, Los Angeles, Chairman.
"Value of Hand Pump and Mounted Water Tanks," M. T. Levy, Master Mechanic, Stockton (Demonstration).
"Care of Motors," Ed. Henry, Master Mechanic, Los Angeles.
"Modern Fireboats," Walter Forward, Berkeley.
"Care and Use of Fire Extinguishers," M. D. Murphy, Chief, Stockton.
General Discussion.
12:00 midnight—Stag Smoker.

Thursday, October 4—(Volunteer Day)

7:00 a. m.—Exhibition Volunteer Drill by Corvallis Fire Department.
7:30 a. m.—Exhibition Volunteer Drill by Rio Vista Fire Department.
8:00 a. m.—Automatic Sprinkler Demonstration.
8:30 a. m.—Music by Dunsmuir Fire Dept. Band and Community Singing.
9:00 a. m.—"Organizing Volunteer Departments," Mark Ryan, Chief, Redwood City.
9:40 a. m.—"Financing Volunteer Departments," Joe Wood, Chief, Renton, Washington.
10:00 a. m.—"Maintaining Interest of Members and Public in Volunteer Departments," Thomas Graham, Chief, Corvallis, Oregon.
10:20 a. m.—"Industrial Volunteer Fire Departments," H. J. Wilson, Fire Prevention Engineer, Associated Oil Company.
10:40 a. m.—"Volunteer Fire Departments in Sawmills," C. P. Peterson, Chief, Scotia.
11:30 a. m.—General Discussion on Volunteer Fire Departments.
12:00 m.—Volunteer Lunch—Travelers Hotel.
1:00 p. m.—Visit to Exhibit Hall.
1:30 p. m.—Special Feature by an Exhibitor of Special Interest to Volunteers.
2:00 p. m.—"Value of Rural Protection to the Small Cities," W. A. Groce, Asst. State Fire Marshal, Washington.
2:30 p. m.—Fire Alarm Telegraph Meeting—Little Theatre. Chas. C. Mulligan, Fire Alarm Supt., Vancouver, B. C., Chairman (Program to be submitted).
"Locating Trouble in a Fire Alarm System," Chas. A. Savariua, Superintendent of Fire Alarm, Portland, Oregon.
"The Installation, Care and General Management of Fire Alarm Batteries," Chester Lynch, Seattle.
Commissioners' Meeting—C. A. Bigelow, Fire Commissioner, Portland, Chairman.
Auxiliary Hall.
6:30 p. m.—Official Dinner and Grand Ball at Auditorium.

Friday, October 5

7:00 a. m.—Exhibition Drill by Seattle Fire Dept.
7:30 a. m.—Exhibition Drill by Berkeley Fire Dept.
8:00 a. m.—Automatic Sprinkler Demonstration.
8:30 a. m.—Music by Oakland Fire Dept. Band and Community Singing.
9:00 a. m.—"Manufacture, Care and Use of Fire Hose," Louis Almgren, Chief, San Diego (Motion Pictures).
9:30 a. m.—"Arson Investigations," Chas. H. Lum, Asst. General Manager of the National Board of Fire Underwriters, San Francisco.
10:00 a. m.—"The Fire Chief and His Relationship to Adjustments," Curtis Herald, Independent Adjuster, Seattle.
10:30 a. m.—"Insurance and Its Relationship to the Fire Service," Frank J. Agnew, Superintendent of Agencies, Firemen's Fund Insurance Co., San Francisco.
11:00 a. m.—"Organization of Fire Districts," Norman Johnson, Los Angeles County Fire Department.
11:20 a. m.—"Salvage Work," Frank C. McAuliffe, Chief of Patrols, Chicago.
11:40 a. m.—"Value of Athletics in Fire Departments," F. L. Barnett, Athletic Director, Los Angeles Fire Department.
12:00 m.—Northwest Chiefs' Lunch—Senator Hotel. Everyone welcome.
1:00 p. m.—Visit to Exhibit Hall.
1:30 p. m.—Special Feature by an Exhibitor.
2:00 p. m.—General Discussion of Topics of the Day. (Taken up in order).
2:30 p. m.—Meeting of the California Fire Chiefs, adjourning for trip to Auburn, Dance and Dinner.
Trip to Auburn, Calif., and visit to gold fields of '49, concluding with dinner at Auburn Country Club; also Dancing and Entertainment. Hosts, Placer and Nevada Counties Volunteer Fire Departments.

Saturday, October 6

9:00 a. m.—Closing Session. Music and Singing.
Report of Committees.
Routine Business.
Permanent Award of Thos. H. Ince Cups.
Election of Officers.
Selection of next convention city.
Installation of Officers.
12:00 m.—Adjournment.
2:30 p. m.—Leave for Week end Trip to Lake Tahoe.
7:45 p.m.—International Delegates leave for Philadelphia on Fire Chiefs' Special via Ogden, Salt Lake, Denver, Omaha, Chicago, Niagara Falls and New York City.

Tex Rickard Interested in Extinguisher

Departing somewhat from his chosen field, "Tex" Rickard, promoter of large sporting events, is now interested in a dry powder fire extinguisher that may soon be marketed.

A test of the extinguisher was held in Long Island City, N. Y. on August 30, in the presence of several fire chiefs and fire protection men. The main test was one made in an open pit containing 250 gallons of oil and one hundred gallons of gasoline. The material was ignited and after it had been burning, for a while, the extinguisher was applied. The dry powder was conveyed through rubber hose lines by means of compressed air. Two lines soon had the fire under control. Small fires in pans were put out by throwing handfulls of the material at the base of the fire.

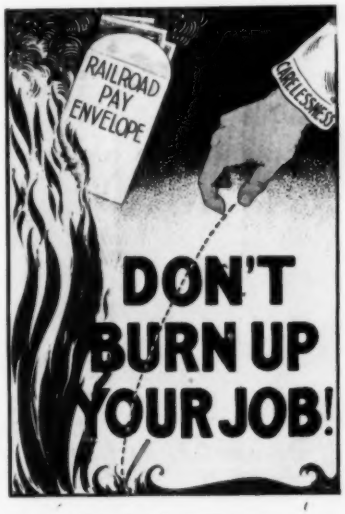
The powder was developed by E. W. Hanks, one time interested in promoting boxing matches in Maine.

Mr. Rickard said, "The extinguisher is not ready to be marketed. You can see that there are still a number of things to be developed. We will have to work on some portable outfit with compressed air to force the powder on to the fire. I am very well pleased with the way this powder had worked out at these tests."

Those interested in the powder were not very keen about giving information on it to the public.

Railroads Urge Protection of Jobs

Through the Railway Fire Protection Associations, posters are being posted by the various railroads urging their employees to consider fire protection as a means for safeguarding their jobs. The poster is printed in red and black with space for the name of the railroad displaying the sign. This is part of program planned for Fire Prevention Week.



New Railway Poster

The annual meeting of the Railway Fire Protection Association will be held in Cincinnati, Ohio, October 9-11 at the Hotel Gibson. B. S. Mace, is chairman of the committee on arrangements.

Exhibits will be displayed that will be of interest to the various members.

The program has not been finally arranged. It is still in its tentative form and will be sent to the members as part of the next news letter. Special entertainment will be provided for the ladies who will attend. Those planning to attend are urged to make their reservations early. R. R. Hackett is secretary-treasurer, 1207 B. & O. Bldg., Baltimore, Md.

New Hampshire Firemen Hold Convention

The thirty-first annual convention of the New Hampshire State Firemen's Association was held in Colerook on September 4. Following routine matters of the association, an address was given on "Importance of Drill Schools and Fire Colleges," by F. A. Murray, ex-chief of Morris Cove, Conn., and one on "The Fire Hazard and Protection of Lake Regions," by Chief Arthur W. Spring of Laconia, N. H.

A parade was arranged to start at noon, followed by a dinner. Following the afternoon session, games and sports were arranged. In the evening there was dancing from nine to twelve at the Blue Bird Pavilion.

President Issues Proclamation

Each year, just prior to Fire Prevention Week, it has been the custom for the President of the United States to call to the attention of the people the importance of giving heed to protection of property against fire, and to the appalling fire losses throughout the states. And so this year, in accordance with his practice of previous years, President Coolidge has issued the following proclamation:

By the President of the United States of America.

A proclamation:

The economic and social progress of the nation is dependent to a large degree upon the proper direction and control of all elementary forces within it. Fire, a friendly aid and comfort when used properly, becomes a deadly foe when permitted to range unchecked. The dangers of fire, and to some extent the means of controlling it, have been understood generally from a very early period. However, year by year, fire has resulted in the destruction of thousands of lives and much material wealth. In 1927, property loss alone in the United States due to fire is estimated to have totalled more than $475,000,000, while loss of life from the same cause was likewise heavy.

A certain measure of encouragement is to be derived from the fact that fire losses in the United States were decreased in 1927 as compared with 1926. Cooperative efforts on the part of our citizenry in recent years have shown that many types of fires are preventable. Widespread interest and activity in fire prevention have had a marked influence in bringing about a realization of public responsibility in dealing with the fire waste problem. Cities, towns and farming communities, engaging in a constructive campaign to inculcate sound principles of fire prevention in the minds of thinking inhabitants, are accomplishing highly desirable and satisfactory results. There is urgent need, however, to translate this effort into further remedial action. Increased vigilance on the part of all citizens is necessary, for their cumulative efforts will determine the future reduction or increase in our national fire waste.

Therefore, I, Calvin Coolidge, President of the United States, do recommend that the week beginning Sunday, October 7, 1928, be observed throughout the nation as Fire Prevention Week. United and coordinated endeavor in reaching the consciousness of every citizen is desired and can be obtained by the concerted action of our press, our schools, our churches and the civic and welfare organizations of every community, rural and municipal. During the last few years the observance of Fire Prevention Week has furnished a stimulus and guide for activity throughout the year. With this precedent it is to be hoped that every community will strive continuously for the elimination of fire hazards and put into practice the fundamentals which will be stressed during Fire Prevention Week. The adoption of simple precautionary measures at all times will be rewarded by a higher degree of security to individual life and property.

In witness whereof I have hereunto set my hand and caused the seal of the United States to be affixed.

Done at the City of Washington this 13th day of September in the year of our Lord One Thousand Nine Hundred and Twenty-eight, and of the Independence of the United States of America the one hundred and fifty-third.

(SEAL)

CALVIN COOLIDGE.

By the President: Frank B. Kellogg, Secretary of State.

San Bernardino Has Two Platoon System

On August 1, upon the recommendation of Chief Frank D. Scovel, the council of San Bernardino, Cal., adopted the two platoon system. It has now been in operation over a month, and all the men are keen for it. Whereas they formerly worked twenty-four hours a day, six days on and off the seventh, with one hour allowed for meals, they now have better working conditions.

Under the new plan, the shifts alternate every third day, the off going shift works twenty-four hours every change. In this way, a man has a twenty-four-hour leave every six days. The firemen have been contemplating a campaign for better working conditions for several years. They feel indebted to the State Firemen's Association, the Pacific Coast Association of Fire Chiefs, and to Jay W. Stevens, fire marshal of California for the change.

The department serves a city of 40,000 population. There are four fire stations in which are housed two 750-gallon pumpers, two 400-gallon pumpers, two combination salvage hose wagons, one 75-foot aerial ladder and one city service truck with deck gun.

The personnel consist of one chief, assistant chief, battalion chief, eight captains and eighteen firemen. All are under civil service regulations, excepting the chief, who is appointed by the mayor.

Council Prepares for Fire Prevention

Encouraged by the appreciable drop in the annual fire losses for 1927, and by the encouraging reports of the *Journal of Commerce* that the losses for 1928 thus far are much lower than the similar period during 1927, the National Fire Waste Council of the Chamber of Commerce of the United States, has made plans for the observation of Fire Prevention Week, October 7–13.

With the cooperation of the National Fire Waste Council, the National Chamber has consistently urged its member organizations to recognize in fire prevention an activity which might profitably be undertaken in every community throughout the land. The program of the National Fire Waste Council and the Chamber of Commerce of the United States is based upon continuity of effort. To encourage this work, there is an annual competition, the Inter-Chamber Fire Waste Contest, among similar organizations affiliated with the national group.

The membership of the National Fire Waste Council consists of the following organizations: American Institute of Architects, American Institute of Electrical Engineers, American Society of Mechanical Engineers, Boy Scouts of America, Factory Mutual Inspection Department, Fire Marshals' Association of North America, International Association of Civitan Clubs, International Association of Fire Chiefs, International Association of Fire Fighters, Motion Picture Producers and Distributors of America, Mutual Fire Prevention Bureau, National Association of Credit Men, National Association of Insurance Agents, National Automatic Sprinkler Association, National Board of Fire Underwriters, National Fire Protection Association, Railway Fire Protection Association, Underwriters' Laboratories, U. S. Bureau of Chemistry, U. S. Bureau of Mines, U. S. Bureau of Standards, U. S. Forest Service and the Western Actuarial Bureau.

Each year, novel plans have been devised in many cities to bring home the fire prevention message to the individual homes.

Map Company Collects Shingle Data

Field men of the Sanborn Map Company have been instructed to collect information on town and city ordinances relative to fire-resistive roofing ordinances. The Sanborn Map Company issues topographical maps showing the various buildings within a city, the features of the buildings and information that appeals to fire prevention men and insurance companies.

The following is a sample of the information that it tabulated: "Greensboro, N. C.—ordinance prohibiting wooden shingle roofs adopted October 25, 1926. All wooden shingle roofs to be replaced by fire resistive roofing within fifteen years. For ordinary repairs not over ten per cent of roof to be replaced with wooden shingles. In case of fire, not over twenty per cent."

Such information will be distributed as fast as it is collected by their field men when making surveys.

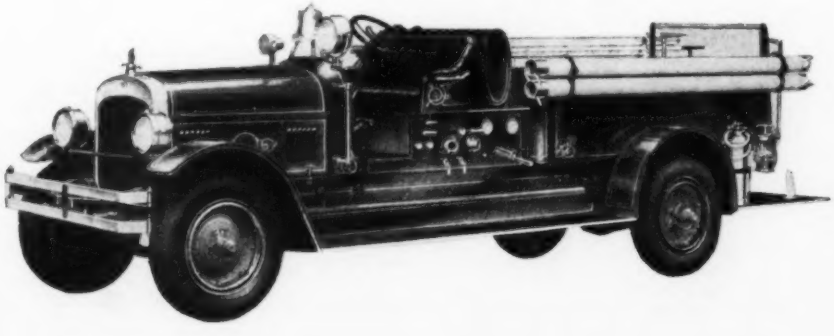
Families Trapped by Burning Stairs in New York City

Three lives were lost in the Harlem section of New York City due to the impossibility of the tenants using the stairways to escape. Fire broke out in the apartment house, in a congested section of the city. Firemen carried fifteen persons to safety by means of the extension ladders. One man was seriously injured when he jumped from a fourth-story window.

SEAGRAVE FIRE Apparatus meets every severe test satisfactorily

Poll the largest industries and institutions of the nation to discover the source of their fire protection, and you will learn that most of them depend on Seagrave Fire Apparatus.

Among the nationally known organizations and institutions depending on Seagrave Apparatus are The Gulf Refining Co., Santa Fe R. R., Rock Island R. R., Carnegie Steel Co., Crane Co., Phillips Petroleum Co., duPont-Rayon Co., Ohio Hospital for Epileptics and the State Hospital at Norwich, Conn.



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ROTO-RAYS!

A Signal that Commands Attention

BUCKEYE Roto-Rays make it possible for traffic officers, motorists and pedestrians to instantly identify the Fire Department after dark—the time that danger lurks in every shadow and at every street intersection.

The shriek of a whistle or the clang of a bell, first puts the public on the alert. But to distinguish the apparatus or officer's car from other illuminated objects, both moving and stationary, is a difficult task.

BUCKEYE ROTO-RAYS SOLVE THE PROBLEM.

These three powerful, revolving red signal lights, standing out in plain relief against the confusion of other lights upon the streets, enable every one to definitely establish the exact location of the apparatus, and in which direction it is proceeding.

It is another guaranteed Buckeye Product to be sold for Fire Department Service Exclusively.

Prices and Full Particulars upon application.

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Salvage Covers

"SHUREDRY" Covers stand the gaff. They give unfailing satisfaction — *always* . . . as proof of which, read what Chief Cody of the Atlanta Fire Department has to say of them:

> ***"We have been using 'Shuredry' salvage covers in the Fire Department for a period of twenty years, or more, and have received wonderful service from them. It is my opinion that your covers are superior to any on the market.***
>
> ***"It is with pleasure that I recommend your product to anyone desiring service and satisfaction."***

Cost less, weigh less, and easier to handle and spread than rubber covers. Do not crack when folded and left on shelf.

Write for sample and price.

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A complete ball-bearing motor. Electric Siren that will not run down your battery. Our SIRO-DRIFT uses about two seconds of current out of every sixty. Clutch between Siren and motor that will start an automobile. One trial of a SIRO-DRIFT means one hundred per cent equipment.

The Siren gives best results mounted in front of radiator on the frame or cross-bar. Give size of cross-bar.

We would be glad to ship a Siren to any City or Fire Chief on trial, transportation prepaid.

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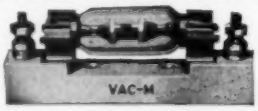

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what one delayed or lost alarm might cost in life and property, you will install VAC-M Arresters to protect your fire alarm against the interruptions caused by lightning and short circuits.

Want the Facts?

THE NATIONAL ELECTRIC SPECIALTY COMPANY
TOLEDO . . . . OHIO

INDUSTRIAL PLANT PROTECTION

Carbon Dioxide Effective in Tests

Following a conference of the U. S. Steamboat Inspection Service inspectors to determine the merits and efficiency of carbon dioxide gas as an extinguishing medium for fighting fires in inflammable liquids, a number of tests were arranged at the plant of the General Carbonic Company in Long Island City.

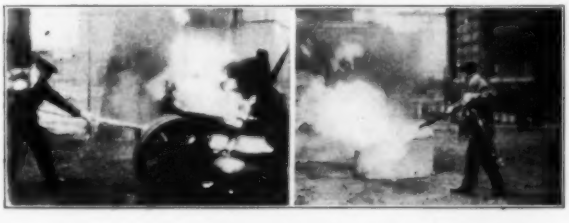
For the first test, a metal dip pan two feet wide, two feet long and one foot high was partly filled with five gallons of alcohol and the contents allowed to burn for about thirty seconds. The fire was extinguished in five seconds.

Another test was made on the same pan. An attempt was made to extinguish the fire with foam, but the alcohol broke down bubble formation and the foam proved ineffective.

Four metal tubs, two feet in diameter, each containing two gallons of gasoline, were ignited and allowed to burn for twenty seconds. Two pump type carbon tetrachloride extinguishers were ineffective in controlling the fire which was later extinguished with carbon dioxide.

A round tank four feet in diameter, two feet high, was filled with water up to twelve inches from the top, and five gallons of gasoline placed in the tub. A hot fire resulted. It was extinguished in twelve seconds.

Several gallons of lacquer were spread on a metal tray three feet wide by three and one-half feet long. The pan was ignited



Scenes at Tests of Carbon Dioxide Extinguishers in Long Island City

and soon was entirely covered with flames. This fire was put out just as fast as the operator could cover the pan with the snow.

There were several other tests; an automobile engine was set on fire, the ground over an area twenty feet long by five feet wide was strewn with gasoline, and on another test, all of the containers used in previous experiments were set on fire. Carbon dioxide snow proved effective in every case. In order to show that this material was not injurious to cloth, a bystander had this snow sprayed on his clothing. The snow turned into gas and no mark or indication was left to show that such material had been applied.

It was demonstrated that the extinguisher was capable of extinguishing fires in troublesome liquids such as alcohol, bisulphide, lacquer, naphtha, benzine or gasoline. It is desirable about electrical units as snow is not a conductor of electricity and the gas is harmless.

The principle of this extinguisher, which is marketed by the Fyre-Freeze Corporation, is to displace oxygen which is necessary to support combustion, with carbonic gas. This gas is fifty per cent heavier than air and lies in an inert condition over the surface, creeping into the smallest crevice. The extinguisher is in the form of a steel cylinder fitted with a short piece of metallic flexible hose having a funnel-shaped nozzle. The cylinders are filled with liquified carbon dioxide gas under pressure of eight hundred pounds a square inch. It is operated by turning a hand valve which releases the gas into the hose and through the nozzle. The release of gas to the atmosphere solidifies it to dry carbonic snow. This snow is 110° below zero. The sublimation of the snow back to gas absorbs heat in great quantities and the gas displaces the oxygen needed to support combustion. Without oxygen, fires can not exist, and the flames die out.

Ft. Dodge Firemen Inspect Stores—The quarterly inspection of business and public buildings in Ft. Dodge, Ia., has just been completed. In all 675 inspections were made.

Suggestions on the Use of Lacquers

Instructions have been issued by the Hartford Accident and Indemnity Company of Hartford, Conn., to decrease the danger attendant to the use of lacquers. Following are the suggestions:

1. Use only lacquers containing non-poisonous substances.
2. Provide adequate exhaust ventilation before beginning spraying operations.
3. Arrange ventilating equipment so that fumes will not pass through fan.
4. Respirators and masks should not be depended upon to combat fume hazard unless they are equipped with tube leading to fresh air supply.
5. Employ a gun pressure that does not produce an excessive amount of mist.
6. Workers using lacquers containing lead and silica should be periodically examined by a physician.
7. Separate booths should be provided for each spraying operation.
8. Lacquers should be stored in fire-resistive structures, well ventilated and lighted with vapor-proof globes.
9. Main supplies of lacquer should not be stored in the factory proper.
10. Solvents and diluents should not be stored in the factory proper.
11. Use only incandescent vapor-proof globes for lighting.
12. Guard in an approved manner all switches and plugs.
13. Motors and flames should be safely isolated from spraying rooms.
14. Ground all electrical connections and make sure that thinner containers are grounded on metal supports—thus guarding against static electricity.
15. Iron or sparking metals should not be used for cleaning and scraping.
16. Steel lacquer drums should not be used for pressure containers.
17. Lacquers should not be mixed in the spraying room.
18. Air compressors should not be located in the spraying room.
19. Fire protection apparatus, extinguishers, sprinkler systems, etc., should be provided.
20. Keep equipment and factory clean—organize a strict, systematic cleaning schedule.

Goats Are Fire Preventionists

There is one oil company that realizes that goats are of some value in reducing the immense annual fire loss. They spent $13,000 for 2,800 goats and saved $100,000 in fire insurance premiums.

This company has a 160-acre tank farm where 14,000,000 gallons of gasoline and crude oil are stored. If the grass, weeds and other vegetation were permitted to grow, the fire hazard would be increased many fold. It was necessary to eliminate the brush fire hazard about the tanks.

Goats were purchased to keep the grass down. They are looked upon as a business investment for in addition to eating the grass about the tank, the oil company clips mohair twice a year and obtains an income of $13,000 from this product.

N. Y. Firemen Teach Police Use of Masks—Three members of the New York Police Department were assigned to temporary duty with the New York Fire Department to learn the methods they employ in controlling ammonia leaks, and the general use of gas masks.

Aerial Truck Delivered to Morristown, N. J.—A 75-foot Ahrens-Fox aerial truck has been delivered to Morristown, N. J. This is the fifth piece of Ahrens-Fox equipment delivered to that town. A new salvage truck has been ordered and will be delivered soon.

Asbury Park, N. J., Favors Exercises—Asbury Park, N. J., fire department is very much in favor of setting up exercises. These exercises are held every morning at 6:30 a. m., even during some of the cold winter days. Captain Tighe of that department believes that all paid fire departments should have them, even if only for a few minutes daily.

SAFETY FIRST METHODS BROUGHT INTO FIRE DEPARTMENT PRACTICE

Not Always Possible to Consider Safety First, but It Should Be Used as Much as Possible—Firemen Should Not Take Needless Risks

By GUY E. WESTNER, Kokomo, Ind.*

THE progress of the Safety First movement that has been sweeping over the country has been remarkably rapid. The Safety First slogan is now universally recognized as a warning to be more careful and to use precaution. No concern that has many accidents is considered highly efficient.

Safety engineering has become a well established profession. It is, however, a comparatively new field of endeavor. Nevertheless, its importance is indicated by the vast amount of money that is annually being spent by employers to safeguard their machinery and working places and in educating their employes.

There is also a yearly waste of $500,000,000 which is now incurred by preventable accidents. To this monetary factor should be added an untold amount of human suffering and sorrow, the maimed, incapacitated beings which each year's accidents bring forth, and, finally, the death toll of industry.

Employers are spending a great amount of time and money to further the cause of safety and in seeing that it is practiced. Accidents cause disorganization and delays; whereas, safety promotes cooperation and efficiency. Safety and efficiency are the twins of industry; one is practically useless without the other.

Children Must Be Trained

Education is the keynote to universal safety. The time is not far distant when courses in safety engineering will be embodied in the curriculum of every technical school and college. Safety is already being taught in some of our public schools. If we are to prevent successfully, accidents, we must begin teaching and training our school children and students in safety work.

The children and students of today are the workers and employers of tomorrow. The public school is the logical starting point for this educational campaign and the work should be extended to and amplified in our technical schools and colleges. We cannot begin too early in this great cause for humanity.

While "safety" cannot always come "first" in fire department work, yet we may apply it as much as is practical.

We might begin at the engine house. When an alarm is sounded, everybody gets to his respective place and waits for the location. Many times in the hurry to get started, the man taking the alarm off is forgotten and in trying to catch the truck is side-swiped at the door or otherwise injured. Care should be taken that everybody is on before going out.

False Alarms Are Dangerous

In some cities, the traffic lights are so arranged that the red light may be through in all four directions by a convenient switch placed in the alarm room by the man taking off the alarm. This is a very effective method of clearing the right of way for the fire trucks, or rather causing the traffic to stand in one place.

Pulling a "false" alarm should be considered a more serious offense than it now is in most places, for most serious accidents seem to occur during runs to false alarms. Whether an accident occurs or not during that particular run, the fireman is taking the same chance going to that box as he would going to a real fire.

The firemen are not protected enough going to and returning from fires. To go to a fire in some cities, you would think the traffic was going to the fire and the firemen were just going to see where the fire was. People will get in front of the truck and just stay in front, thereby hindering the firemen from getting to the fire when every minute counts.

State laws and city ordinances should be enacted to punish any person or persons hindering the progress of firemen while going to, returning from, or during a fire because firemen are employed by the public and engaged in protecting public property. Usually the firemen will do the best that can be done under the circumstances.

Police should attend all fires as there is always the usual crowd of people to be kept at a distance; and people running over the hose and sometimes over the firemen. Firemen taking off hose to reach around the house do not have time to look up and down the street to see if it is clear before going across. A policeman would be an asset at any fire because most cities do not have enough firemen to act as firemen and police at the same time.

Rules for Safety

In conclusion, a few "safety first" don'ts and suggestions will probably not come amiss, such as:

(1) Do not take any unnecessary risks; there are too many necessary ones.

(2) Never allow your mind to wander from your work while going to a fire.

(3) Always have your truck as near under control as possible.

(4) None but those whose duties require it should be allowed to ride on trucks.

(5) Never do any unnecessary talking while going to a fire.

(6) One man should never be allowed to go into a smoky basement or any dangerous place by himself.

(7) Unless absolutely necessary, never depend upon another person for your own safety, but look out for yourself.

(8) Drivers should remember that several lives are dependent upon them.

(9) Be SURE gas masks and other apparatus are examined periodically to see that they are ready for instant use.

(10) Wherever possible, be sure you are safe and then go ahead. Always wear your fire hat.

* Chairman, Firemen's Welfare Committee, Indiana Firemen's Association. From the *Indiana Fireman*.

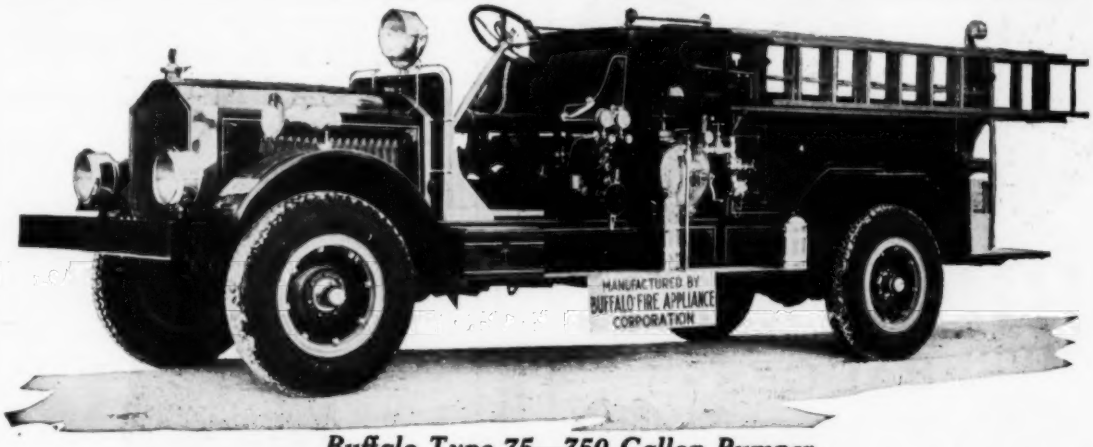
Fireman Hero of "General Slocum" Dead

Twenty-four years ago, the General Slocum, loaded with women and children of the St. Mark's Lutheran Sunday School, burned in the East River shortly after it had left its pier. Peter J. Lynch, member of the New York Fire Department had a day off then and he strolled down to the river. He saw the accident. Rowing out to the river in a boat that was tied to the pier, he succeeded in saving forty-one lives.

He died September 13, after a long illness, at the age of seventy-five.

Mr. Lynch was awarded many decorations for the General Slocum rescue work. He was decorated with the Congressional Medal, by the American Legion of Honor and the United States Volunteer Life Saving Society. Nor was that all. Previous to the incident, eleven months after he had joined the fire department, he was placed on the fire department Roll of Merit for saving the lives of two children. He was injured at this time and was in the hospital for two months.

He was placed on theatre inspection work in Westchester for some time previous to his death.



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D. A. Woodhouse, Pres. and Gen. Mgr. George J. Kuss, Vice Pres. and Treas.

PROPOSED IMPROVEMENTS

Rosenhayn, Cumberland Co., N. J.—Cumberland County Fire men's Association meet with Deerfield Township committee to discuss matter of fire protection for the above township Township now dependent on surrounding communities for protection.

Houston, Harris Co., Tex.—City considering erecting station for Company No. 25. W. A. Dowdy is City Architect.

Castle Shannon, Allegheny Co., Penn.—Reports state that inadequate fire protection facilities is handicapping the local department in their endeavor to render efficient service at fires. Leo Schenot is Chief.

McGregor, Clayton Co., Iowa.—Council considering the purchase of a new piece of fire apparatus.

Gloversville, Fulton Co., N. Y.—City contemplating erection of new fire station. Frank J. Clark, Mayor.

Charlotte, Mecklenburg Co., N. C.—Site for the new Wesley Heights fire station to serve western section of city has been purchased by City Commissioners. Bonds to the amount of $125,000 have been voted for building and equipping two fire stations.

Bristol, Bristol Co., R. I.—Plans completed for erection of new fire station at Hope Street, for the Defiance Hose Co.

McMinnville, Warren Co., Tenn.—At election held Sept. 1 city voted in favor of a $25,000 bond issue, part of which is to be used for purchase of fire apparatus.

Sherwood, Milwaukee Co., Wis.—(Mail Milwaukee) At recent election village voted in favor of a $50,000 bond issue and purchase of fire apparatus and erection of fire station.

Carlsbad, San Diego Co., Calif.—Funds raised for purchase of new fire apparatus.

Harvey, Jefferson Co., La.—David Crockett Fire Co. No. 1, raising fund for the purchase of a triple combination car, to cost $7,500.

THERE SHOULD BE NO QUESTION ABOUT VALUE OF VENTILATION

Smoke and Gases Render Work of Firemen Difficult—Men Instructed to Open Up but to Conserve Property—Dust Explosions Prevented

By RAOUL GAUTHIER

Chief of Fire Department, Montreal, Canada*

NO Fire Chief of larger cities may entertain the least doubt as to the value of ventilation. Too often at our arrival at fires we are confronted by conditions that render our work very difficult: buildings filled with smoke, which makes the task of our firemen dangerous in trying to get into such buildings. Should they be successful in penetrating into the buildings, it would be impossible for them to direct the streams of water with any degree of efficiency, as the seat of the fire is not discernible. In such cases there is only one thing to do, and that is to open without delay skylights, skuttles, doors, floors, roofs, coverings over elevator shafts, etc., in places where in their judgment smoke will be more rapidly released. Members of our ladder shifts are usually employed at such work, while other firemen make ready to play water on the fire the moment they can get at proper range of it and kill it.

Naturally, firemen are not ordered to break doors and windows, skuttles and skylights everywhere they are called to extinguish a fire. Far from that, our standing orders are to put out fires as rapidly as possible, without any undue damage by water and smoke, as well as prompt salvage of stocks, which would otherwise be greatly damaged.

Ventilation is an important part in the strategy of the extinguishment of fires, and I may say that it is due to it if we are able to control fires which otherwise cannot be located nor extinguished before considerable damage has been done.

Through ventilation we often prevent explosions and all damages following accumulation of smoke, heat and gases of all kinds. Preferably we open a channel for the smoke and gases at the top of the building.

Ventilation prevents heavy losses in hundreds of fires by enabling us to fight them at close range; it prevents explosions and all the damage they cause; it enables firemen to save large stocks which would otherwise be spoiled by the smoke; and last, but not least, it saves the firemen from many dangers of asphyxiation and injuries.

As to the manner in which ventilation should be made, it varies greatly according to conditions. As a rule we must say that ventilation is to be made with judgment, and by such methods as are familiar to all firemen of ordinary experience.

*Abstract of paper presented at convention of Dominion Association of Fire Chiefs, Kingston, Ont., Canada.

Dickers Over Cost of Fighting Fire

The proverbial New England thriftiness has even spread as far west as Salt Lake City, Utah. One resident there believes in having a definite understanding with the other party before purchasing merchandise. She employed the same practice when she found her home afire and could not extinguish the blaze with her methods.

She called up the fire department and asked, "How much does it cost to have a fireman help put out a fire?"

"There is no charge, lady," the fireman replied, "and it will be no more expensive to have the whole department come down. But speak quick, where is the fire?"

"Well, this is Mrs. George Scown speaking. My home is on fire. I have tried to put it out myself, but I think I had better have at least one fireman to help. Oh yes, I nearly forgot. I live at 807 Park street. I'll be ever so much obliged if you will send someone down."

The fire company was rustled out of bed and instructed to extinguish the fire *without charge* lest the blaze spread to other buildings.

C. R. George of Houston Dead

Clarence R. George, city electrician of Houston continuously since 1898 and for a term of years secretary of the International Association of Municipal Electricians, died at his home in Houston after an illness of six weeks.

Mr. George was one of the best known municipal electricians in the country and widely known as an inventor of traffic lighting systems and other electrical appliances.

He was prominent in the affairs of the International Association of Municipal Electricians for many years, serving as secretary for fully thirteen years. He was also widely known as a fire alarm expert and filled many important missions for the Gamewell Fire Alarm Telegraph Company.

Traffic lights installed in Houston some seven years ago under the direction of Mr. George were designed by him and practically all the electrical apparatus owned by that city was installed and much of it designed by him.

Mr. George was a familiar figure for many years at conventions of the International Association of Fire Engineers as well as the Municipal Electricians.

A. B. COCHRANE

CONVENTION DATES

Sept. 18-19—IOWA FIREMEN'S ASSOCIATION. 51st Annual Convention, Independence, Ia. Secretary, E. E. Parsons, Marion, Ia.

Sept. 18-20—MASSACHUSETTS STATE FIREMEN'S ASSOCIATION. 49th Annual Convention, Hotel Nichols,, Haverhill, Mass. Secretary, Daniel J. Looney, 1043 Old South Bldg., Boston, Mass.

Sept. 21-22—NEW JERSEY STATE FIREMEN'S ASSOCIATION. 51st Annual Convention, Atlantic City, N. J. Secretary, William Exall, Chamber of Commerce Bldg., Newark, N. J.

Sept. 21—NEW JERSEY STATE FIRE CHIEFS' ASSOCIATION. Annual Meeting in evening, Atlantic City, N. J. Secretary, Fred A. Trowbridge, 17 South Street, Morristown, N. J.

Oct. 1-5—PENNSYLVANIA STATE FIREMEN'S ASSOCIATION. 49th Annual Convention, Uniontown, Pa. Secretary, Charles F. Clark, 411 Bellevue Avenue, Wayne, Pa.

Oct. 1-6—PACIFIC COAST ASSOCIATION OF FIRE CHIEFS. 35th Annual Convention and School of Instruction for Firemen, Sacramento, Cal. Secretary, State Fire Marshal, Jay C. Stevens, Merchants' Exchange Bldg., San Francisco, Cal.

Oct. 9-10—MISSOURI VALLEY ASSOCIATION OF FIRE CHIEFS. Annual Convention (tentative date). Secretary, Chief Ray Tiller, Waterloo, Ia.

Oct. 9-11—RAILWAY FIRE PROTECTION ASSOCIATION. Annual Convention, Hotel Gibson, Cincinnati, Ohio. Secretary-Treasurer, R. R. Hackett, 1207 B. & O. Bldg., Baltimore, Md.

Oct. 11-12—GREAT LAKES ASSOCIATION OF FIRE CHIEFS. Annual Convention (tentative date). Secretary, Chief Frank C. McAuliffe, Chief of Patrols, 100 Desplaines St., Chicago, Ill.

Oct. 15-17—EASTERN ASSOCIATION OF FIRE CHIEFS. (Eastern Division, I. A. F. C.) First Annual Convention, Bellevue-Stratford Hotel, Philadelphia, Pa. (Just preceding I. A. F. C. Convention.) Secretary, T. Howell Johnson, Room 602, Chamber of Commerce Bldg., Newark, N. J.

Oct. 17-20—INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. 55th Annual Convention, Bellevue-Stratford Hotel, Philadelphia, Pa. Exhibits at Second Regiment Armory. Secretary, Chief James J. Mulcahey, Yonkers, N. Y.; Executive Secretary, Jay W. Stevens, Merchants' Exchange Bldg., San Francisco, Cal.; Chairman, Exhibits, Chief August Gerstung, Elizabeth, N. J.

Oct. 29-31—KANSAS STATE FIRE CHIEFS and FIREMEN'S ASSOCIATIONS and WOMEN'S AUXILIARY. 13th and 42nd Annual Conventions and 3d Meeting, respectively, Liberal, Kan. Secretary, Chief K. D. Doyle, Wamego, Kan.

Aledo, Ill., Receives Apparatus—The new pumper with chemical tanks purchased for the protection of farms near Aledo, Ill., has been delivered. The apparatus was purchased by a fund raised by farmers. It will be housed in the Aledo fire department but will not be used in the city unless in an emergency.

FALSE ALARMS

NOT TO BLAME

The city commissioners were considering the construction of a fire station. There had been some opposition to the erection of such a building in some parts of the city, and the commissioners with the chief were making a tour of desirable locations.

"Well, chief how does the land lie out here?" asked one commissioner.

"It isn't the land that lies, it's the real estate men."

SHE LOST AGAIN

Truck Company 8 was speeding down the main thoroughfare, when without any warning, it crashed into the rear of a touring car. A man was in front of the car and a much excited woman in the rear.

Before the truck driver could back up he heard the touring car owner turn around and shout at his wife:

"Never mind talking. I got my end of the car across. You were driving the back seat and if you let it get hit by the fire truck, it's no fault of mine."

"How large is the fire department that you work in?"

"Well, it takes a good story about two weeks to get from the chief back to the chief again."

LOOKING AHEAD

Company had arrived for the Sunday dinner, and after they had filled the various crevices of their stomachs with everything possible they turned to Stanley, the five-year old young hopeful.

"And what will you be when you grow up?" asked one of the group.

"A fireman," replied Stanley with pride.

The questioner was surprised. She had expected him to say he would be a doctor, lawyer, writer or something equally dignified. But she said:

"What a noble opportunity for unselfish service!"

"Huh," grunted Stanley, "I'll just fill this whole house with water so I can sail my boat."

NOT INTENTIONAL

People will build houses in the woods, and of course such homes are just as apt to catch on fire. One fireman in dragging his hose line through some bushes, came in contact with poison ivy and was laid up for some time.

He made application to collect compensation for this accident.

The Commissioner refused saying, "Poison ivy is not an accident."

"The deuce it isn't," yelled the sufferer, "do you think that I did it on purpose."

NO BACK TALK

Grady was a bricklayer working on a school house job—Riley, once an intimate friend of his, was a fireman at headquarters.

Grady fell from the scaffold and dropped two stories. The town's ambulance was quartered in the fire station and it was Riley that rolled up with it to the scene of the accident. He found Grady stretched out on the ground.

"Are yez dead, Grady?"

"Oi am."

"Shure, Grady, you were always such a liar, Oi don't know whether to believe yez or not."

"Look here, Riley, doesn't that prove that Oi'm dead. Ye wouldn't dare to call me a liar if Oi wur alive."

SLOW BUT SURE

Happy and shiftless George had been trying to join the colored fire company of his city for over a month, but he lacked the necessary qualifications. He had only a slight knowledge of arithmetic and figures were essential in fire department work. So George started to study arithmetic.

One day a friend asked him, "How yo all getting along with yo 'rithmetic, George?"

"Well, I don' learned to add the aughts all right but de figgers bother me a lot."

HE HAD A METHOD

One rural community was very strict about motorists following fire apparatus too closely. They had one fireman specially detailed to get the number of all offending motorists. One day, on the way to a fire, an offender was caught.

"Say you," he shouted, "What in the hell do you think you are? Don't you know that you shouldn't follow apparatus so closely?"

"It's like this," roared the motorist above the din, "I was hurrying to reach you before all tickets for the firemen's baseball game was sold out. Have you got two tickets?"

"See me when we stop, I've got fine seats for you. Lovely day, isn't it?"

Many a married man stays home at night because he has the house to himself.

FLEA JUST THE SAME

Captain Jones was scheduled to write a paper for the coming firemen's convention. And when the chief said to do it, of course there was no alternative.

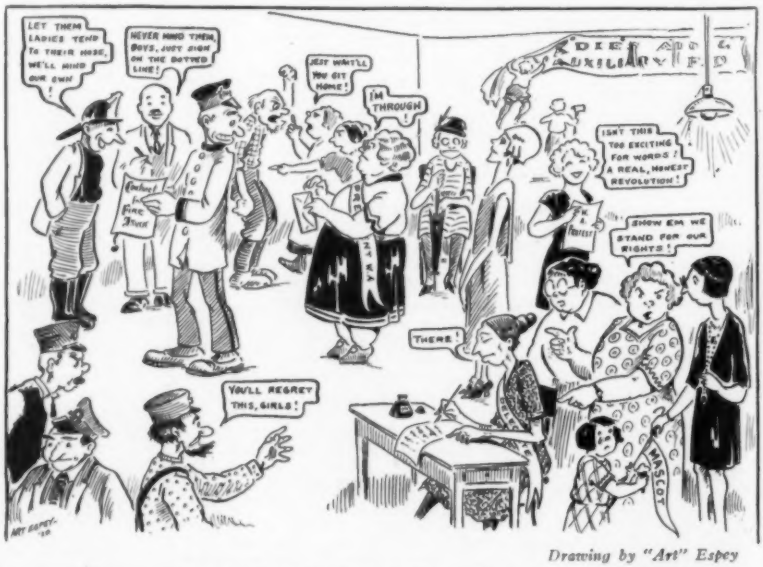
The fire commissioner on the way to his office was surprised to see the captain at the desk scratching his head and look blankly at the wall.

"What are you scratching your head for?" he asked.

"I am trying to get an inspiration."

"That's a new name for them, isn't it?"

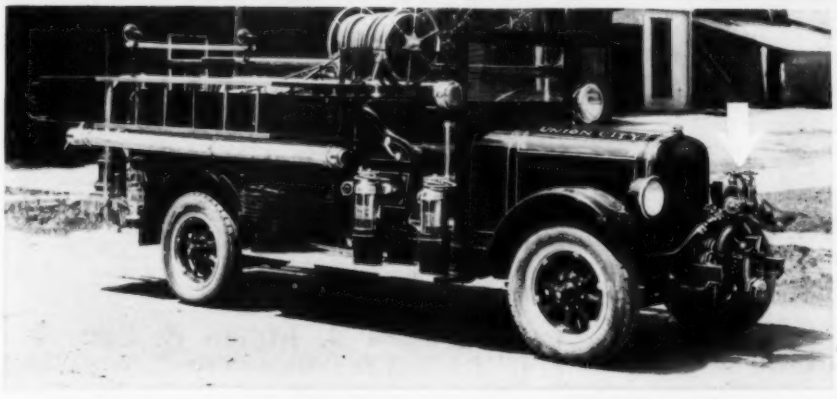
Beginner's luck: Happiness during the first two weeks after marriage.


LET THEM LADIES TEND TO THEIR HOSE, WE'LL MIND OUR OWN!
NEVER MIND THEM, BOYS, JUST SIGN ON THE DOTTED LINE!
JEST WAITTILL YOU GIT HOME!
I'M THROUGH!
ISN'T THIS TOO EXCITING FOR WORDS! A REAL, HONEST REVOLUTION!
SHOW 'EM WE STAND FOR OUR RIGHTS!
THERE!
YOU'LL REGRET THIS, GIRLS!
MASCOT

Drawing by "Art" Espey

Whenever There's Trouble, There's Generally a Woman Involved

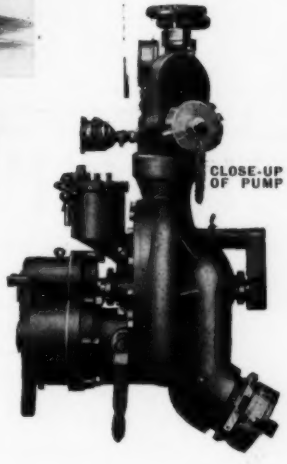
It doesn't require much to start trouble. Somewheres in New Jersey there was a fire department doing its best to keep the fire losses low and planning to raise funds for the purchase of new fire apparatus. But in addition to the firemen, there was a ladies auxiliary with an inflated estimation of their importance. The fire department voted to purchase a certain type apparatus. Officers of the auxiliary presented their resignation and refused to assist in raising funds to purchase the apparatus. The firemen agree now that woman has her place, but that her place is in the home. How interesting it must be for the fireman whose wife is a member of the auxiliary. That's when there is a house divided against itself.



Reo Speed-wagon apparatus equipped with Barton Fire Pump. Furnished complete to Union City, Michigan by the Boyer Company, Logansport, Indiana.

More Water per Dollar

SAVE 50% of your fire pump cost! You can, if you specify a Barton. Get the facts on this wonderful new development which so many cities, towns and villages are now using — operates successfully with practically any type of apparatus — high pressure — large capacity — rock bottom price. Consult with any of the leading fire apparatus people, or write us direct for Bulletin 60.



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AMERICAN STEAM PUMP COMPANY
BATTLE CREEK, MICHIGAN

BARTON
FIRE PUMPS

RED ARROW SIREN

Siren with Storm Hood

1. Double-tone, and of greatest carrying power.
2. Ball bearings throughout.
3. Accurately machined and balanced.

30 Days' Free Trial

Write for Circulars

DECOT MACHINE WORKS
Sauk City, Wis.

JOHN H. CLAY, INC.

1320 Ridge Ave., Philadelphia, Pa.
Established 1864

DOOR SPRINGS

Complete Automatic Spring Outfits for Doors Opening In and Out. Used throughout the world. Once on the doors your door opening troubles cease. They last a lifetime. Send for Bulletins.

MATHEWS
(Reg. U. S. Pat. Off.)
FIRE HYDRANTS
for
DOMESTIC
and
HIGH PRESSURE
Service

NOTE—

The positive waste valve.

All operating threads are dry, being above the stuffing-box.

No toggles, no small, quick-wearing parts.

All moving parts are bronze or bronze-bushed.

The outside casing permits replacing a two-way standpipe with a steamer and two-way standpipe without digging up the ground.

An easily installed
EXTENSION SECTION
readily adapts them to new grade.

VALVES and BOXES
CAST IRON PIPE
(Sand-Cast or "Sand-Spun")
FITTINGS

R. D. WOOD & CO., Phila., Pa.

Novo Acid Jars & Holders

of every description, stronger than lead and non-corrosive. Used by departments throughout the country.

Chemical Tanks and Lally Quick Opening and Self-packing Top for Chemical Tanks

Lally Improved Fire Hose Couplings, Fire Extinguishers and Charges, Fire Hose and Fire Department Supplies in General

Send for Complete Catalog

LALLY FIRE APPLIANCE CO.

Wilmington Brass Co., Wilmington, Del.

MORSE

FIRE BOAT EQUIPMENT

Invincible and Callahan Nozzles

Fire Department Supplies

are in use throughout the country and giving unsurpassed service.

Every fire official should be fully acquainted with Morse equipment and have our catalog and other descriptive literature on file for ready reference whenever considering the purchase of new equipment.

You will find that it pays.

Write for Catalog

Andrew J. Morse & Son, Inc.

221 High St. Established 1837 Boston, Mass.

HALE PUMPS

LONGER effective life, higher efficiency and greater freedom from trouble may be had by using Hale Dreadnaught Fire Pumps.

HALE FIRE PUMP CO.

Conshohocken, Pa.

EASTMAN NOZZLES

For greatest efficiency.

For ease of handling.

Unsurpassed for solidarity and distance.

Specify Eastman when ordering

SAMUEL EASTMAN COMPANY

Concord, N. H.

COREY

Hydrants as manufactured by "Rensselaer" are being used to fight fire in every State of the Union. Made of the very best material and workmanship.

"The Rolls-Royce among Fire Hydrants"

RENSSELAER VALVE CO.,

TROY, N. Y.

ROTARY PUMPS FIRE HYDRANTS

Waterous Dependable

Send for our Complete Catalog

Agents in Principal Cities

WATEROUS COMPANY

St. Paul, Minnesota

EDDY

Fire Hydrants

Are given preference by so many fire protection and water works men because they know that more than half a century of experience go into their manufacture and they embody valuable and exclusive features.

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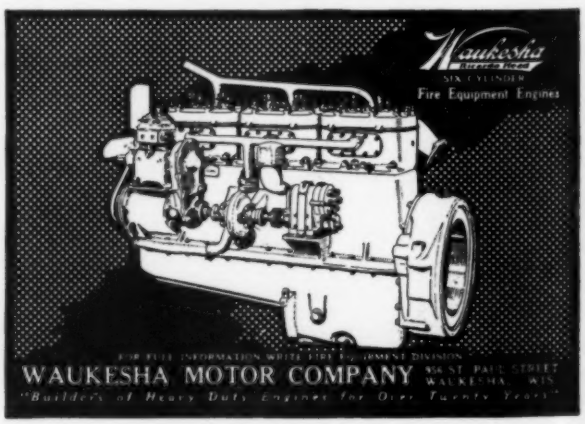
EDDY VALVE CO.

Waterford, N. Y.

James B. Clow & Sons, Chicago Agents



FIRE DEPARTMENT ACTIVITIES

Glen Rock, N. J., to Buy Apparatus—Glen Rock, N. J., has purchased a Larabee fire apparatus for $6,600.

Cardiff, N. J., to Erect Fire House—Cardiff, N. J., is selling stock with which to erect a fire house.

Primghar, Ia., Buys Fire Apparatus—Primghar, Ia., has purchased Universal fire apparatus. Similar type machines have been delivered to Estherville and LeMars recently.

Chief Stout Injured in Practice Drill—Chief I. M. Stout of Edinburg, Tex., is suffering from a broken thigh bone received when he jumped from a moving fire truck during a practice drill.

New Pumper for Britt, Ia.—The fire department of Britt, Ia., has just placed in service a new pumper equipped with a Barton pump.

Triple Combination for Hazelton, Ia.—A triple combination apparatus has been ordered by Hazelton, Ia., for its Fire Department. The unit will be equipped with a Barton pump.

Coleman, Tex., Has New Fire House—A city hall and fire station have been completed in Coleman, Tex., at a cost of $40,000.

Throop, Pa., to Buy Fire Apparatus—Throop, Pa., is considering the purchase of fire apparatus which is estimated will cost $7,000.

Fire House Erected in Bridgeville, Del.—The new fire house erected in Bridgeville, Del., is now occupied by the fire company.

New Britain Awaits New Apparatus— Delivery of a new Maxim pumper is awaited by New Britain, Conn., some time about November 1.

Pumper Tested at Skaneateles, N. Y.—A Mack pumper has passed the Underwriters' test at Skaneateles, N. Y., and has been accepted.

Millstone, N. J., Has Fire Department—A fire department has been organized in Millstone, N. J., and fire apparatus purchased through private subscriptions.

Huron, S. D., Wants Aerial Ladder—The fire department of Huron, S. D., has held meetings with the Chamber of Commerce to consider the purchase of an aerial ladder. The purchase of two additional gas masks was also requested.

Fire Apparatus Purchased for Marshall, Mo.—A Studebaker truck fitted with equipment supplied by the General Manufacturing Co., of St. Louis, has been purchased by Marshall, Mo. Shipment is expected within ninety days.

Dover, O., Increases Firemen's Pay—Salaries of members of the fire department in Dover, Ohio, have been increased. The pay of regular firemen has been increased from $125 to $130 a month, and that of the chief from $145 to $155 a month.

Mishawaka, Ind., to Have New Station—Plans have been approved for a two-story, English design fire station, to be erected in Mishawaka, Ind. The building cost has been estimated at $20,000.

Motor Boat for Fire Protection—The Delavan, Wis., Lake Improvement Association has installed a Barton pump in a motor boat for the protection of cottages and other buildings around the lake. The pump is driven by the motor boat engine.

Ex-Chief of Owensboro, Ky., Dead—O. L. Johnson, former chief of Owensboro, Ky., died recently at the city hospital. Mr. Johnson, in recent years, was connected with the state fire marshal's office.

Ventnor, N. J., May Relay Fire Alarm Lines—Ventnor, N. J., is considering the reconstruction of the fire alarm circuits which were originally installed fifteen years ago. It is estimated that the improvement will cost $70,000.

Sewer Explosion Damages Newburgh Houses—Five buildings in the business section of Newburgh, N. Y., were damaged by a series of five sewer explosions. They are believed to have been caused by gasoline in the sewers. Several were taken to the hospital, but none seriously injured.

Aledo, Ill., to Have Rural Protection—Delivery is expected soon of fire apparatus purchased with a fund raised by 104 farmers for the protection of farms near Aledo, Ill. A charge of $25 will be made to those who did not contribute to the fund and who desire the services of the apparatus.

Work Started on E. Liberty Fire Station—Construction has started on a $350,000 combined police and fire station at Broad and North Euclid avenue, East Liberty, Pa. A number of old buildings have been razed to make way for this improvement.

No Bonfires in Portland, Ore.—No bonfires can be started in Portland, Ore., without a fire permit. The city will not issue such permits until after the city has some rain. Everything is dry, and it is feared that the smallest spark will develop into a good size fire.

Keyport, N. J., Wants Squad Wagon—Keyport, N. J., is planning to raise funds for the purchase of a squad wagon. Although organized but four months, the squad has answered nine calls and cooperated with a number of doctors. The squad is equipped with first aid accessories and an H and H inhalator.

Albany, N. Y., Firemen Want Increase—Firemen of Albany, N. Y., are working for the pay increase that was denied them last year. Officials believe that the firemen are entitled to the increase but the problem is how to finance the raise.

Delaware Township Merges Companies—Five fire companies in Delaware township, N. J., will be merged into one unit. The new company will be known as the Delaware Township Volunteer Fire Company and will include units from Woodland, Erlton, Woodcrest, Ashland and Merchantville Terrace.

Compensation Denied Fire-Fighter—Compensation has been refused the widow of a man who was electrocuted while fighting a fire in the Borough of Mahaffey, Pa., because the community had no organized fire department. This decision has been sustained in court.

Boston Superintendent Retired on Pension—Eugene M. Byington, seventy-nine years old, former superintendent of steam fire engines and high pressure for the Boston Fire Department, and now retired on a pension, surprised his friends by marrying Miss Bertha Randall, daughter of a former member of the department.

Portland, Ore., Limits Firemen's Work—A general order has been issued by Chief Grenfell of Portland, Ore., prohibiting members of the department from doing extra work that would deprive other men from employment. This order has been issued because there is a large number of unemployed men in the city. Complaint has been received that firemen are taking their time off duty to do outside work.

Santa Barbara Reorganization May Be Halted—The plan to reorganize the fire department in Santa Barbara, Cal., under the direction of Chief Thomas Baird and Deputy Chief Charles F. Freeman may be halted temporarily as the result of petitions now in circulation which would call for a referendum vote on ordinances creating their positions. Officials are waiting before they will take action.

New Castle, Pa., Has Central Station—The new central fire headquarters of New Castle, Pa., is about ready for occupancy. The most modern equipment and appliances have been used in the construction of the building. There is a large dining room and kitchen in the rear of the second floor. On the upper floor is a dormitory with eleven beds. The station is equipped with a large hose drying tower.

Seven Eliminated from Fresno Department—There has been a reorganization of the Fresno, Cal., fire department. Twenty-one positions have been abolished and fourteen new places created thus decreasing the personnel by seven. Three district chiefs' posts were abolished. The work of the deputy chief will be performed by the first assistant chief and the work of the district deputies will be taken over by the second and third assistant chiefs.

Speeding Apparatus Injures Five—Five persons were injured, some seriously, when a speeding fire company swiped a crowd at a firemen's tournament held in Floral Park, N. Y., in order to avoid hitting a policeman who was clearing the course for the oncoming apparatus. The accident occurred in front of the grandstand. The rear end of the fire apparatus skidded and injured some of the crowd who had broken through the guard lines.

Chicago on Strict Economy Basis—Acting under orders, from Mayor Thompson, various departments, including the fire service, have been commanded to decrease their operating expenses. A saving of $637,000 has been ordered from operating expenses of the fire department. The present force will be retained but neither $200,000 for new equipment nor $37,000 ordered for new ambulances will be used. In addition any vacancy in the department occurring before January 1 will not be filled. Other departments have been forced to drop men from the pay roll.

OF INTEREST TO VOLUNTEER FIRE DEPARTMENTS

GOOD HIGHWAYS MAKE FARM FIRE PROTECTION POSSIBLE

How a Small Community in Illinois Started a Campaign to Purchase Apparatus and Steps That Were Taken to Protect Farm Members

SEVERAL large fires were necessary to awaken the residents of Durand, Ill., to the necessity of having some means to protect property against fire. The following account in *The Farmer* tells of the steps that were taken to purchase the needed apparatus and the plans that were made to protect farm property.

Finally, the village board was asked for fire protection, but was informed there were no funds, a common occurrence in small villages. After going over the matter carefully a group of us decided to raise the money by subscription. We went back to the village trustees proposing that we would purchase suitable fire fighting equipment, if they would man, house and maintain it, and would give service to farm subscribers, to which they readily agreed.

How were we to go about raising the money? What kind of equipment should we buy, and from whom? Where was it made, and many other things had to be taken into consideration. After many meetings and much data, we worked out a plan that could be submitted at a public meeting. We told the people our plans and asked their cooperation in soliciting. We had printed a proposal, showing the kind of equipment, its cost, what the village had agreed to do, etc. At the bottom of the proposal was a promissory note payable at the banks, provided we raised $6,000.

We then made a map of the surrounding country within a radius of five miles, listing all the dwellings in the country and village, dividing it into districts and appointed solicitors for each district. The solicitor was given a list of the property owners and the quota to be raised in that district.

Canvas Made of Community

After a few weeks we called a meeting of the solicitors, with the result that 95 per cent of the people had subscribed, including some who were not listed. The subscription went over the $6,000 mark.

A meeting of the subscribers was called, and a purchasing committee, president, secretary and treasurer elected.

The purchasing committee made many trips to look at different equipment in order to make the best possible purchase. Finally a 500-gallon pump with booster tank and first aid chemical tank were purchased. These two fire fighting outfits have been delivered and are awaiting the underwriters' test.

These fire trucks have been the center of attraction in the town. The village was so pleased with the apparatus that they concluded the old town shed was not good enough for this fine machinery. The foundation for a fireproof engine house 24 x 40 has been laid, a fire marshal appointed and a volunteer company is being trained.

The subscribers have elected a Board of Trustees and have a contract with the village board relative to proper maintenance and service to be rendered to the subscribers free of charge both in the village and in the country. If at any time this contract is broken, the trustees have the power to take over the equipment.

We have had many inquiries regarding our plan. I believe if this plan were standardized and other communities were organized as has been done in Durand, it would curb the great fire loss in rural districts. With the good roads we have today, the fast motors, the modern fire fighting equipment such as booster tanks, motor driven pumps and the small supply of water, the farms can have almost the same fire protection as the village.

In order to make the volunteer fire department efficient, which is just as important in fire fighting as good equipment, we are effecting the following plans:

For service rendered, members of the department to be compensated out of a fund created by giving dances, etc.

Map to show location of each subscriber's buildings, the available water supply and the distance to the next.

This will be shown on an indexed card and filed in the engine house, so that in case of fire the attendant may present it to the fire chief, who can study it en route to the fire and thus know the base of water supply.

After each run the person responsible for the condition of the fire trucks is to report the equipment in readiness for future use.

The above system, put into practice, will, I believe, cut the fire hazard in our community, and if extended to other communities, will naturally cut the constantly increasing loss by fire in the rural districts.

Grain Fields Destroyed by Fire

Damage estimated at $100,000 resulted from a fire that destroyed 80,000 acres of grain fields and pasture land in the Eureka Flats grain country between Walla Walla, Wash., and the Touchet River. A change in the direction of the wind stopped the advance of the flames but only after many farmers had their season's crop burnt. In some cases, farm buildings were destroyed and the owners just had time to escape.

The flames, spreading like a funnel from their start near Walla Walla, separated into two tongues at the Hatch ranch. One section was stopped within a mile and a half of the Snake River which is seven miles west of Eureka, and the other six miles southeast of Eureka near the Touchet River. The men who fought the flames, backfired in an attempt to stop the fire, but only a change in the wind brought successful results.

Telephone lines were destroyed and roads blocked. The fire is believed to have started either from a locomotive spark or a discarded cigarette.

The Fireman Is Always the Man of the Hour

In time of need, it is always the fire department that comes to the rescue of some unfortunate. And so too at Liberty, N. Y., when a cloudburst flooded the Rondout Valley section of the Catskills. The upper photograph shows a company from Kingston, N. Y., that was called out to assist marooned individuals. Lower—Showing condition of flooded streets of Liberty, N. Y.

Your Catalog Page

Fire Protection Equipment and Supplies

1 Acid Siphons.
2 Adaptors for Changing Hydrant Threads.
3 Acid Jars and Rings.
4 Aerial Ladders, Detachable.
5 Aerial Trucks.
6 Alarms, Siren, Electric.
7 Alarm Systems, Industrial.
8 Alarm Systems, Municipal Telegraphic.
9 Alarms, Thermostatic.
10 Asbestos Clothing.
11 Badges, Insignias, Buttons, etc.
12 Banners, Trumpets, etc.
13 Battery Jars.
14 Battery Zincs for Fire Alarm Batteries.
15 Bells, Fire Alarm, Municipal.
16 Body Equipments.
17 Boxes, Gongs, Reels, Registers, Fire Alarm.
18 Brakes, Air.
19 Brake Linings.
20 Brooms, Fire.
21 Building Materials, Fire Retardant.
22 Caps, Firemen's.
23 Chains, Non-Skid, Fire Apparatus.
24 Chassis for Fire Apparatus.
25 Chemical Engines and Tanks.
26 Chimney Cleaning Compounds.
27 City Service Trucks.
28 Coats & Suits, Firemen's Quick Hitch.
29 Combination Chemical & Hose Cars.
30 Cutting & Welding Equipment, Blow Torch.
31 Cutting & Welding Equipment, Electric.
32 Deluge Sets.
33 Door Openers, Fire Station, Automatic.
34 Extinguishers, Fire, Soda & Acid.
35 Extinguishers, Fire, Tetrachloride.
36 Extinguishers, Fire, Foam.
37 Extinguishers for Chimney Fires.
38 Fire Boat Nozzle Equipment.
39 Fire Department Supplies, General.
41 Fire Exit Devices, Door Opening.
42 Fire Alarm Posts.
43 Fire Escapes, Portable.
44 Fire Escapes, Rigid.
45 First Aid Equipment.
46 Flare Lights.
47 Flashlights, Hand.
48 Foam Liquid for Extinguishers.
49 Gas Masks and Respirators.
50 Gas & Smoke Helmets.
51 Gasoline & Oil Handling Equipment.
52 Goggles, Firemen's.
53 Helmets, Metal, etc.
54 Hose Carts, Reels & Racks.

Help Yourself!

This page is here to make it *convenient* for you to get complete specifications and prices from *reliable* manufacturers of equipment needed for your department. It is *your* page to use freely without any obligation.

To get the information you want, just mail in the coupon below with your name and address and numbers that indicate the equipment listed below on which you would like descriptive literature.

We will then notify reliable manufacturers of your interest in such equipment and request that they send you complete information. They will gladly do this and it will be a pleasure for us to help you in this way. No charge whatever! Help yourself!

For Information on Any Equipment Not Listed, Write on This Page or Use Separate Sheet.

55 Hose Clamps.
56 Hose, Fire.
57 Hose, Chemical.
58 Hose Holders.
59 Hose Jackets.
60 Hose Standardization Tools.
61 Hydrant Draining Pumps.
62 Hydrants, Fire.
63 Jacks for Fire Trucks.
64 Jacks, Shoring & Prying.
65 Ladders, Fire.
66 Lightning Arresters.
67 Motorcycles, Fire Dept. Equipped.
68 Nets, Life.
69 Nozzles, Pipes & Misc. Brass Goods.
70 Packings, Pumps.
71 Pads, Pole Hole.
72 Paints, Fire Resisting.
73 Priming Ether, Motor
74 Pumping Cars, Standard.
75 Pumping Cars, Foam.
76 Pumps, Fire Apparatus.
77 Pumps, Fire Service, Stationary.
78 Pumps, Portable, for Fire Protection.
79 Record Books, Fire.
80 Relief Valves.
81 Reviving Apparatus, Oxygen.
82 Rubber Clothing.
83 Searchlights.
84 Shingles, Fire Retardant.
85 Shirts, Firemen's Special.
86 Sirens, Apparatus & Chiefs' Cars.
87 Sliding Poles.
88 Soda & Acid Chemicals.
89 Spark Plugs, Fire Apparatus & Motorcycles.
90 Squad and other Auxiliary Cars.
91 Sprinkler Head Shut-Offs.
92 Sprinkler Supervisory Service.
93 Sprinkler Systems, Automatic, Foam.
94 Sprinkler Systems, Automatic, Water.
95 Starters, Fire Apparatus, Automatic, Air.
96 Steam Fire Engines.
97 Tarpaulins & Fire Blankets.
98 Tetrachloride Chemicals.
99 Thawing Equipment, Hydrant.
100 Tires, Fire Apparatus, Pneumatic, Solid, Cushion and Non-Skid.
101 Tractors.
102 Traffic Clearing Systems.
103 Triple Combination Pumping Cars.
104 Uniforms.
105 Water Towers.
106 Wheels, Cushion.
107 Whistles, Fire Alarm, Compressed Air.
108 Whistles, Fire Alarm, Steam.
109 Whistles, Fire Apparatus.
110 Wrecking Trucks.

---------- TEAR OFF HERE ----------

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225 West 34th St., New York City.

As a fire protection official I should like to have descriptive literature and complete information mailed to me, without cost or obligation, on the equipment indicated by the following numbers:

Nos.....

Nos.....

Nos.....

Date.....

Name.....

Position.....

Street.....

City and State.....

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.....9-19

Saves time - *and costly hose*

No. 1 (Capacity 3 to 7 tons, weight each 72 lbs.)

No. 2 (Capacity 3 to 12 tons, weight each 118 lbs.)

Complete Information of Prices on request

It's often necessary to move apparatus at a fire. Automobile traffic hates to be held up by a line of hose stretched across the right of way.

Why ruin your hose by driving over it? Or waste valuable time cutting off and disconnecting?

The Wausau Protector is a big time and money saver—easy to handle and carry. Order a set today, or write us for particulars.

Wausau Fire Hose Protector Co.
1520 Harmon Place, Minneapolis, Minn.

JACOB REED'S SONS

Founded 1824 by Jacob Reed

FIREMEN'S UNIFORMS

Thoroughly tailored of especially selected fabrics. Uniforms that look well, wear well and that will give entirely satisfactory service.

Reed's Uniforms are most economical because they represent full value for the amount expended.

Write for catalog and prices.

1424-1426 Chestnut St., Philadelphia, Pa.

BI-LATERAL FIRE HOSE

THE BI-LATERAL FIRE HOSE CO.
230 West Randolph St., Chicago, Ill.

If a hose salesman can convince you by any argument that his three-year guarantee will result in just as good an adjustment, should one be necessary, as a guarantee for six years, from a reliable company, certainly if you have a goat, he's got it.

BI-LATERAL FIRE HOSE is guaranteed six (6) years.

Triple Combinations

300-350 and 500 Gallons Capacity

Light and Heavy Hook and Ladder Trucks.
Miscellaneous Fire Fighting Equipment.
Fire Department Ladders.

Write us when interested

COMBINATION LADDER CO., Inc.
381 Fountain St. Providence, R. I.

THE BLANCHARD "FLEXI-COT"

provides for speedy yet safe humane handling of the injured.

Quick, safe handling of the injured may save a life or prevent lifelong disability. The BLANCHARD FLEXI-COT is the apparatus approved and adopted by well-equipped departments.

"Take a tip from Blanchard and save your men"

Manufactured by

ARTHUR H. BLANCHARD
25 Hampshire Street Cambridge, Mass.

6 Patented Features

ERICK SIREN

Thorough Weather Protection
Erick Sirens do not clog up. Snow and ice cannot enter and stop sounding rotor. Completely protected and sheltered from outside influences.

Features That Prove Supremacy

Instant Alarm
Every telephone is a fire alarm station, permitting operator to sound alarm instantly, giving your fire department a chance to get the jump on the fire.

Universal Sound Projector
The Erick Sound Rotor and Deflector is built to instantly send a Fire Alarm.

Our Free Trial offer is made in all sincerity. We welcome your inquiry.

ERICK ELECTRIC SIREN CO.
STATE AND FILLMORE AVE., ST. PAUL, MINN.

LARKIN Shut-off Nozzles

Over 2000 Fire Departments have 15,000 Larkin Shut-off Nozzles in service. They have a successful record that is not exceeded by any article used in the fire service. Specify and insist upon them in buying new apparatus.

Write for catalog

The LARKIN Mfg. Co.
Dayton, Ohio

High Grade Fire Dept. Supplies of All Kinds

Fire Alarm Signals
Water Meters
Compounding Valves
Stops
Water Pressure Regulators

Presses for Lining Service Pipe with Cement

Union Water Meter Co., Worcester, Mass.
Incorporated 1868

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They are leaders in their respective lines and are in position to take the best possible care of your requirements.

The fact that they are using advertising space in FIRE ENGINEERING indicates they want your inquiries and will be glad to submit specifications and prices without placing you under any obligations whatever.

They are ready and anxious to serve you courteously in every way possible. Be sure to write them for complete information when considering new purchases—and place your orders with them.

They are helping us make the paper better by their advertising. You can help them and help us and help yourself by giving them your business. Let's all pull together! All will benefit.

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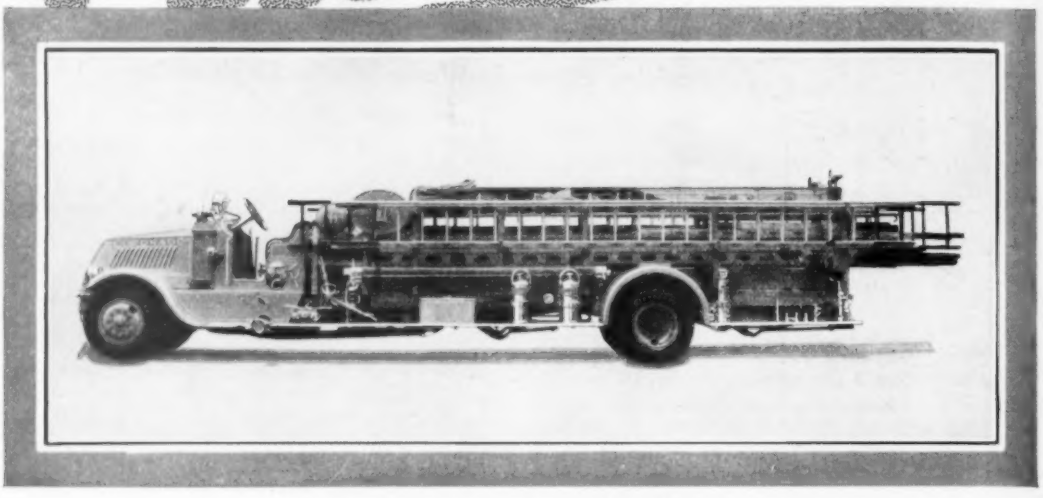

Type 20—750 Gallon Quadruple Combination Car delivered to Coronado, California.

Like the bucket brigade... *two-wheel brakes* are out-of-date

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Where Fabric Fire Hose is made—Plant at Sandy Hook, Conn.

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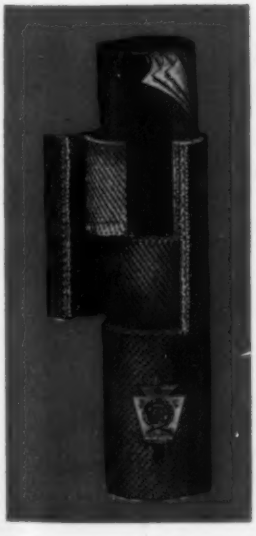

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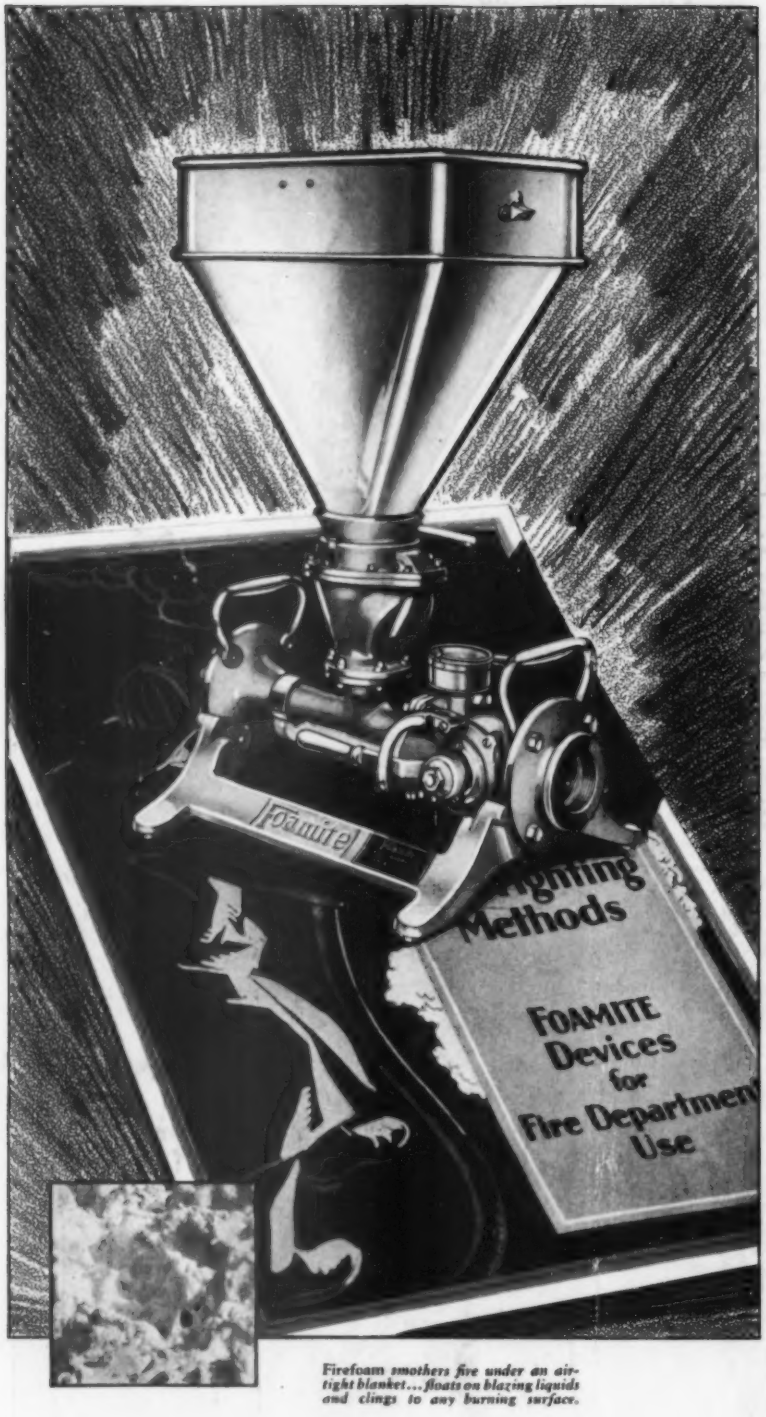

Firefoam smothers fire under an air-tight blanket... floats on blazing liquids and clings to any burning surface.

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The Generator is simple, compact and portable. It is designed for easy mounting on fire apparatus. For backing up a first-aid attack with a larger stream of Foam, it is used and endorsed by Fire Departments in many cities.

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